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ABSTRACT

A study was conducted to analyze the impact of adult basic education (ABE) in New Jersey. Following an extensive review of previous ABE impact studies, data were gathered from a specially selected sample of adult ABE students through an open-ended questionnaire administered by telephone interviews. Students were questioned about their reasons for participation, employment-related outcomes, academic outcomes, affective outcomes, principal benefits gained from participation; and cost benefits of the program were analyzed. All outcomes were positive. For example, program participants were more likely than nonparticipants to have found a job, while promotions, improved earnings, and enhanced job performance exhibited similar gains. The great majority of the participants reported that ABE had helped them to improve their reading, writing, and mathematics skills and said they were applying these skills in their daily lives. In addition, more than 9 of 10 participants reported that they felt better about themselves as a result of participation in the program. In fact, the respondents called increased self-confidence, along with increased academic skill, the principal benefit gained. The study concluded that ABE is cost-effective and prepared a model of procedures for conducting future student follow-up studies. (KC)

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1984

OUTCOMES AND IMPACT OF ADULT BASIC EDUCATION

By

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CHAPTER I

PURPOSE OF STUDY

Introduction

Broadly speaking, the purpose of education is to change people in ways that enhance their development and that of society as a whole. There is no question that schools and colleges do change children and young people. Hundreds of studies have documented the outcomes of formal schooling and determined that in general they are substantial and enduring (see, for example, Hyman, Wright, and Reed, 1975). Of course the purpose of formal schooling, at whatever level, is to socialize the young in preparation for the roles and responsibilities of adulthood. Outcomes or "effects" research, therefore, has focused on cognitive and affective development rather than on the applications or impact of education to functioning in everyday life.

For adult education change of the latter type is of primary importance. For most adults, knowledge, skills, insight or understanding are not ends in themselves, or acquired for future apppplication; instead, they are means for adults to solve immediate problems or improve their proficiencies or circumstances in the everyday world of work, family, and community life (Darkenwald & Merriam, 1982). Thus, outcome research in adult education should focus primarily on "impact" as just described and not on the kinds of variables employed to gauge the effects of formal schooling.

Unfortunately, as discussed in the next chapter, very few well-designed, large-scale studies have been conducted to determine the impact of participation in any form of adult education. The need for impact research on adult basic education (ABE) is especially acute, for the individual and societal needs addressed by these programs are urgent. For most participants, ABE is indeed a "last gamble on education." And the stakes are extremely high (Mezirow, Darkenwald, and Knox, 1975).

Purpose of Study

The present study, though basically concerned with analyzing the impact of adult basic education in the state of New Jersey, is more encompassing than its title suggests. Although it could be asserted that this volume contains three studies in one, it is more accurate to say that the research consisted of three interrelated components, the most crucial being that which addresses the outcomes and impact of participation. This component is crucial because the import and utility of the other components depend in large part on its results.

The three principal goals (components) of the project were these:

(1) To determine the impact of adult basic skills education in New Jersey in terms of (a) attainment of students' own goals for participation and (b) program effects on tangible indicators of social and economic well being.

(2) To ascertain the nature and import of costs and benefits for New Jersey's adult high completion program, including a comparison of the GED and adult high school options.

(3) To design a model, instrumentation, and procedures for ongoing statewide student follow-up.

Rationale

Outcome Component. The need and rationale for the outcome component relates both to the importance of furthering tested knowledge of the effects of participation in adult basic education and of securing "bottom-line" evidence of program impact in order to meet pressing demands for accountability in these times of shrinking state and federal support for educational programs. Put bluntly,in New Jersey and most other states, future funding for adult basic education (including high school completion) will depend in large part on credible evidence of program success or impact. Such evidence need not always be in the form of a cost-benefit analysis, but efficiency or "bang for the buck" is always a paramount concern. To conduct a cost benefits study one needs to ascertain what benefits are in fact salient for participants in the program being analyzed. It is in this way--identification of relevant benefits-that this, the first component of the study, was closely linked to the second.

Very briefly (see Chapter III for details), the outcome component involved interviewing a stratified random sample of New Jersey adult basic education participants (including those preparing for the GED or enrolled in adult high schools), most of whom had been in the program, or discontinued attendance, between October, 1982 and May, 1983. English as a second language (ESL) students were not included in the sample, nor were students enrolled in programs designed for special populations, such as the retarded, prisoners, the mentally ill, and the aged. Respondents were interviewed by telephone about numerous outcome variables, including, for example, extent of personal goal accomplishment, impact of participation on their children's school performance, employment and public assistance status, application of basic skills to real-life situations, and plans for further education or training. Two hundred ninety-four interviews were completed for an extremely high adjusted response rate of 97 percent.

Strictly speaking, the findings are not generalizable to states other than New Jersey. New Jersey, however, is quite typical in many respects of other industrialized states, particularly in the Northeast-Middle Atlantic area and the Midwest. It would be surprising, at least

to us, if replication studies in industrialized states resulted in findings much at variance from our own.

Cost-Benefit Component. Although both ABE and adult high school costs were included and separately analyzed in this part of the study, the benefits analysis was confined to outcomes reported by adults who had obtained a high school credential approximately 14 to 16 months prior to collecting the benefits data. Both monetary and non-monetary benefits were included in the analysis. However, unlike the initial outcome study, this component focused on "credential-effect" benefits presumably attributable to obtaining a high school diploma. A stratified random sampling procedure was employed to select 500 graduates who were then mailed a two-page questionnaire. To enable comparison of costs and benefits of the state's two principal routes to a high school credential, the sampling plan was designed to include 300 GED and 200 adult high school graduates. The overall adjusted response rate was 60 percent.

Although the particularities of New Jersey's funding mechanisms preclude generalizations to other states regarding costs, the model and procedures employed were intended to be exemplary and can be modified to fit the needs of states other than New Jersey. As with the outcome findings, the benefits identified are unlikely to be much at variance with those realized in other industrialized states. However, this is an opinion that needs to be substantiated by replication studies in other states.

Statewide Follow-Up Component. The final goal of the project was to design a model, instrumentation, and procedures for ongoing statewide student follow-up. To accomplish this goal, it was necessary to undertake the preceding research activities in order to identify the outcome variables important and feasible to incorporate in a follow-up model. For example, most past outcome studies have included a question on whether the student or graduate voted in the last election. Although this appears to be an important and relevant question, the research findings indicate that participation in ABE does not meaningfully influence voter registration or voting behavior. Consequently, unless voting is deemed a high priority outcome, it makes no sense to include such an item in a follow-up questionnaire (particularly since such a questionnaire would have to be very brief to ensure a respectable response rate). An example of an important but unfeasible variable is impact on earnings. The reason, as we discovered ourselves, is that too many complex questions need to be asked to arrive at an answer.

This component of the project was obviously addressed to practical concerns at both the state and local program levels. Local programs lack the human and fiscal resources and tested data collection instruments for "tracking" their basic skills students to determine program impact. As a result, program evaluation and improvement efforts have been hindered and so, too, has local-level accountability for state and federal funds. At the state level, the situation is similar. Lack of

adequate, ongoing follow-up data has handicapped efforts to plan rationally for statewide program improvement. Even more pressing, perhaps, is the need to demonstrate to legislative and executive branch decision-makers that public funds invested in adult education are yielding important benefits to the public at minimal cost. Gross measures of impact, such as number of adults served and cost per contact hour, are too crude and limited to make a convincing case for continued or increased funding. Comprehensive data on specific, highly significant benefits to participants and society are required if adult basic education is to thrive, or perhaps even survive, in the 1980s.

One final point bears mentioning. From the beginning this project was designed to be as conceptually sophisticated and technically rigorous as possible within the constraints of a modest budget and one-year time frame. Every effort was made to avoid the shortcomings of previous research, especially in regard to identification of relevant outcome variables, the need for strict random sampling, and the absolutely essential requirement of an adequate response rate. Of course, we also attempted to capitalize on the strengths of previous studies. The next chapter reviews those past outcome studies judged to be of acceptable technical quality and therefore of value in planning this study and interpreting its findings.

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CHAPTER II

PREVIOUS RESEARCH

Introduction

Research on the outcomes of participation in adult basic education programs has been conducted for various reasons. An important reason for outcome studies is to enable administrators to evaluate the strengths and weaknesses of their programs. Another purpose is to provide teachers with information about the effectiveness of their instruction. Finally, a crucial reason for such studies is to provide information on the benefits of ABE, both for the individual and to society, in order to justify continued financial support of such programs by the government.

Outcomes and Indicators

Before these studies may be carried out, the expected outcomes must be clearly defined. First, what is the overall goal of the ABE program? According to the Adult Education Act of 1966, as quoted in Mezirow, Darkenwald and Knox (1975), the purpose of ABE programs is to educate adults "whose inability to speak, write, or read the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability." Adult Basic Education was defined as education designed to "help eliminate such inability" and "raise the education level of such individuals" with the intention of "making them less likely to become dependent on others," "improving their ability to benefit from occupational training and otherwise increasing their opportunities for more productive and profitable employment," and "making them better able to meet their adult responsibilities." In short, the goal of ABE is to enable its participants "to become more employable, productive, and responsible citizens."

These ambitious goals certainly are significant both for the individual and society. The problem for research is how to determine whether these, and others, have been reached. What specific outcomes should be expected as a result of participation? What are the indicators of "success" in ABE? Researchers have varied in their selection of significant outcomes. In general, the outcomes studied fall into four major categories: economic outcomes, educational outcomes, family and socially related outcomes, and personal outcomes.

Economic outcomes are among those most frequently studied, both because they are easiest to measure, and because they provide the most tangible evidence of benefit to the individual and community. Helping the unemployed to qualify for jobs, or helping those already employed to qualify for better jobs, is the central purpose of ABE, according to the Adult Education Act. While finding employment is the variable most often studied, for this outcome to be significant researchers must consider whether the ABE participants were unemployed to begin with.

Studies have also examined the extent to which participation in ABE leads to better jobs, promotions, and salary increases. Another factor related to employment which has been studied is whether participants have increased their job security. An important outcome for society, linked to finding employment, is the elimination of public assistance to ABE participants who become self-supporting.

Educational outcomes are also frequently studied. Since the main goal of instruction in most ABE programs is the improvement of reading, writing, and math skills, outcomes are usually measured in terms of test scores in these areas. Passing the GED test is also used as an indicator of success. Aside from test scores, some researchers have used students' perceptions of their basic skills improvement since participating in ABE. Educationally-related outcomes of participation also include students' plans for, and actual enrollment in, further education and training.

Outcomes related to participants' family and social life can be very significant. One object of research has been the effect of parents' participation in ABE on the school performance of their children. Researchers have attempted to determine this effect by asking participants if they helped children with schoolwork more, and if their children were actually getting better grades. Another variable studied is whether parents reported a more active involvement with school personnel and organizations.

ABE students' general involvement in social institutions is often considered an important factor to examine. The educationally disadvantaged are those who are least involved in community organizations and who often feel alienated from society. A goal of ABE is to encourage greater social awarenes and involvement. Indicators of such involvement have included the use of social services and participation in organized community activities, and voting registration and voting behavior.

Outcomes that are primarily personal or affective are less frequently studied because they are difficult to measure. However, these outcomes may be highly significant for the individual. The application of improved skills, as in the increased reading of newspapers and magazines, or in the comparison of prices in shopping, is more meaningful to students than scores on basic skills tests. Some studies have included students' reports of their actual use of improved skills in daily living. Intangible changes, such as improved self-concept and greater self-confidence are important for success in finding employment and participation in community life. Researchers have assessed such changes by asking students whether they feel differently about themselves as a result of participation, or feel greater ease in relationships with other people.

Obviously, the outcomes of participation in ABE are varied and must be defined carefully. Unfortunately, much past research has been limited by the kinds of outcomes studied or flawed methodologically. Two national studies (Development Associates, 1980; Kent, 1973) are particularly significant for the size of their samples and the scope of the research. One state-wide study, conducted by Boggs in Ohio (1978), is

also unusually thorough.

Other national, state, and local studies which were relatively well-designed are also included in this review. A number of very poorly executed studies have not been included. There is clearly a need for more rigorous research on the outcomes of ABE.

National Studies

A major national study conducted by William Kent (1973) was begun in mid-1971 and continued for more than two years. The major objective was to evaluate the effects of the ABE program on its "priority group" of students. This group was defined as adults from "18-44 years old with less than 8 years of schooling." The sample did not include students over 44 years old, migrants, institutionalized students, and students in English as a Second Language classes. The sample included 2,318 students in 200 classes, 90 programs, and 15 states. Data were gathered on student characteristics, educational goals, and opinions, as well as program and classroom characteristics. The students were tested twice and interviewed three times; follow-up interviews were held at twelve and eighteen month intervals after the initial interview. The first two interviews were conducted in person, while the last were generally by telephone. Of the total sample, 47% were initially interviewed in class, and 15% were interviewed outside of the classroom. The response rate, erroneously computed by Kent as 77%, was actually 62%. About 74% of those initially interviewed were contacted for the first follow-up interview; of this group, 79% were reached for the second follow-up interview.

This study used both test scores and students' own perceptions as measures of academic outcomes. Students enrolled in the ABE programs were given pre- and post-tests with a four month interval. Mean grade level gains between tests were half a grade for reading and three-tenths of a grade for math. However, over 26% gained a full grade or more in reading achievement and nearly 20% gained a full grade or more in math achievement. Approximately one-third of all students made no gain at all or even dropped in scores during the four month interval.

In both follow-up interviews, students were asked how much they believed their abilities to read, write, and work with numbers had improved during the past year. Almost all believed that their abilities had incresed at least to some extent. Almost 50% believed that their abilities in reading had increased very much; 46% believed their math ability had increased very much, and 33% believed their writing ability had increased very much.

Students' plans for further education were also examined. Interviewees were asked if they were or planned to enroll in high school completion, college, or vocational-technical training. Both at the beginning and at the end of the eighteen moth period, about two-thirds planned on additional vocational or technical training. However, the number of

students planning to get a high school diploma declined (from 91% to 81%), and the number planning to attend college dropped from 60% to 37%. The reason for such a drastic change in students' plans to enter college might have been the realization of these ABE students that a great amount of time and study would be required for them to prepare for college work.

Only 31% of the interviewees stated that their main reason for enrolling in ABE was to get a better job. In initial interviews, students were asked if they had looked for work in the past six months; if they had difficulty in finding a job due to lack of education; if they were currently employed and, if so, how many hours worked per week; their earnings, and their chances of getting a raise and of losing their jobs. In follow-up interviews, interviewees were asked the same questions, and if employed, were also asked if they had the same job as when interviewed previously, whether ABE classes had helped them to find a job, helped them in their present job, if they had been promoted, and if they had greater job security.

In general, the students interviewed increased their employment and earnings. At the time of the first interview, 58% had some job earnings; eighteen months later 70% had some job earnings. The earnings of those who worked increased from a mean of $336 per month to a mean of $407 per month. However, when the effects of the 5 to 6% rate of inflation at that time are taken into consideration, combined with the probability that the students available for follow-up interviews were those who had more stable employment, the actual increase in earnings becomes less significant. About 66% of the employed students had received a raise since the first interview. Of these, 15% believed that ABE helped a little, 20% that it helped some, and 12% that it helped a lot in their getting such a raise. Almost 75% of those who worked felt that ABE helped them on the job. A little more than half of the employed interviewees had the same jobs in follow-up as in initial interviews. Of the nearly 50% who had changed jobs, 79% preferred their new jobs.

About 26% of the students at the first interview were receiving public assistance. This figure decreased to 22% in the final interviews. Again, the probability that the students available for follow-up interviews were employed makes this decrease insignificant.

In the area of family and community involvement, this study included only questions in regard to parent-child relationships. Interviewees were asked whether they had school-age (5-18 years) children, and whether they had helped children with schoolwork in the past year. About 50% of initial interviewees had school-age children; 55% of all initial interviewees had helped children with schoolwork in the past year. In follow-up interviews, the percentage who had helped children had risen slightly, to 58%. The effect of ABE was apparently insignificant.

Kent's study does not devote much attention to the primarily personal or "affective" results of ABE. Students were asked about their primary reason for attending ABE classes. About 69% said that their main reason for coming was "mostly to learn something," while 31% came "mostly to get

a better job." Forty-eight percent felt that reading was most important for them to learn, 46% felt math was most important, and 6% felt writing was most important.

As an indicator of the personal application of skills, participants were asked in follow-up interviews if their reading of newspapers, magazines, and books had increased since ABE. Thirty-six percent said such reading had increased very much, and only 15% said not at all.

In the first follow-up interview, participants were asked two questions in regard to health information and services. Some 38% said that the ABE program gave them information about health; 13% said that ABE helped them receive health services.

In conclusion, the Kent study found that participation in ABE resulted in improvement in basic skills, both according to test scores and to students' own perceptions. Benefits also included gains in employment, some increase in earnings, and improved skills on the job. The fact that the majority of students enrolled for educational rather than employment related reasons is important. The methodology used, consisting of follow-up interviews over an extended period of time, is an appropriate way to determine benefits which may not become apparent immediately after participation. The major faults of the study were its lack of attention to the affective changes resulting from ABE and its limited response rate.

An Assesment of the State-Administered Program of the Adult Education Act, conducted by Development Associates (1980), was commissioned by the Office of Evaluation and Dissemination of USOE in 1978 "(a) to provide an analytic description of the Grants to States program, with particular emphasis on program participants; and (b) to identify a set of impact measures that can be studied in a longitudinal design." A large part of the study was concerned with program operations and characteristics, both at the state and local levels. However, one stated objective was to determine ABE program benefits to participants and to society.

Participant data were collected by site visits to a sample of 111 local adult education progams in forty states. Participants included students in ABE, AHS, and ESL classes. The sample was drawn from a list of students registered in the spring prior to the site visits in November-December 1979, so it included both people who had completed the classes and those who had dropped out. Data were gathered from program records about the participants' characteristics and attendance. Interviews were conducted by telephone. At least three attempts were made to contact each student. The interview response rate was 38%: of 3,115 potential participants, 1,177 were successfully contacted and interviewed. Due to differences between those people interviewed and those not reached and the low percentage of the sample contacted, responses are not generalizable to the entire population. Interviewees were more likely to be white, female, middle-aged or elderly, and to live in rural areas. Also, interviewees were more likely to be still enrolled in classes, and therefore to be more positive about the program.

Educational goals were stated as most important by respondents for enrolling in adult education classes. Interviewees were asked to describe the reasons why they enrolled in adult education, and the most frequently reported reason (by 46% of respondents) was to pass the GED. Other major reasons were to acquire basic reading, writing and math skills (stated by 33% of respondents) and to learn the English language (22%). About 54% gave more than one reason for enrolling, but when asked to state the one most important reason, 79% gave one of the above reasons.

Specifically, participants were asked if the classes had helped them to read, write, and work with numbers better. Almost 75% felt their reading skills had improved, 69% felt their math skills had improved, and 66% felt their writing skills had improved.

The results of the study indicated that adult basic education may often lead to further education or training for participants. At the time of the interview, 57% of the respondents were already involved or planned to enroll in other adult education programs. Twenty-three percent were uncertain, and only 17.5% were not planning to participate, and many of these were elderly adults.

When asked about plans for further education or training aside from adult education, 58% indicated that they planned to enroll in the future, most frequently mentioning vocational/technical training (by 29% of respondents). Plans for academic education were also mentioned frequently (by 26% of respondents).

Only 7.7% of interviewees said that one of the reasons they enrolled in adult education courses was to get a job, and only 5.7% said that they wanted to get a better job. Thirty-eight percent of the interviewees were employed full-time, and 14% were employed part-time. When asked if the adult education program had helped them get a better job, only 17.7% replied affirmatively. In the study's report, it is recognized that employment-related gains due to participation in adult education should be assessed more carefully in future studies.

The only question specifically directed to family or community life was whether interviewees felt that participation in the adult education program had helped them "get along better" with their family. About 51% indicated that the program had helped their family relationships.

Participants' perceptions of their personal goal attainment was an important factor considered in this study. Interviewees were asked whether they had successfully reached or were in the process of reaching what they had hoped to attain when they first enrolled. Almost 42% reported successfully reaching their goals and 38% said that their goals were partially attained.

In addition to general goal attainment, interviewees were asked about specific personal outcomes of attending adult education classes. They were asked if the program had helped them achieve "life goals," such as getting a driver's license or using a checking account. About

25% said that they had achieved such a goal. Participants were also asked if the program helped them "think better of themselves." Almost 48% reported that they had an improved self-concept from going to adult education classes.

Finally, interviewees were asked about the most important result of their participation in adult education. The six most frequent responses were: learning to speak English, learning to read and write, increased knowledge (unspecified), increased self-confidence, obtaining a GED, and learning math skills.

Overall, the most significant outcome of participation revealed by this study was an improvement in self-concept. Also significant was the fact that 80% of the respondents had enrolled to attain educational goals, and that almost 80% had at least partially attained their personal goals. However, the results of the study were limited by the low percentage of the sample which was contacted, and by the tendency of respondents to still be enrolled in the program.

Most recently, A National Survey of GED Test Candidates: Preparation, Performance, and 18 Month Outcomes (1983) was conducted by Ronald M. Cervero. One purpose, among others, of this study was to determine the educational and employment outcomes of GED candidates 18 months after they had taken the test. A nationally representative sample of 12,646 GED test candidates completed initial surveys at the time they took the test, in April and May 1980. At that time, 9530 (75.4%) agreed to participate in a follow-up study. Participants differed from nonparticipants in that women agreed to participate more than men, and those passing the GED more than those who failed. Participants were on the average older than nonparticipants.

In October 1981, the follow-up survey was mailed to a 20% sample of those who agreed to participate. A total of 458 were completed, a 24% response rate. The response rate was adjusted to 29.5% because 315 surveys were returned as undeliverable. Again, respondents were older (29 vs. 24 years), had higher GED scores, and were more likely to be female. Another statistically significant difference was that nonrespondents tended to have completed more years of school than respondents. These differences, and the very low response rate, limit attempts to generalize results of the study.

The study of outcomes included only candidates who had passed the GED test, either at the time of the initial survey, or in the 18 month period before the follow-up survey. Of the 458 respondents to the follow-up survey, 383 had passed the test and were included in the study.

Participants were questioned about their expectations and actual outcomes in regard to passing the GED. Less than one-third expected that getting the GED would help them to keep their job, get a job promotion, or get a salary increase. As an actual outcome, 16% reported that the GED helped them to keep their job, 20% to get a job promotion, and 19% to get a salary increase. Additionally, 75% expected the GED to

help them qualify for a new job. Fifty-two percent reportd that it actually did. Seventy-two percent expected the GED to help them to be admitted to an educational institution, and 52% to a job training program. Respondents were asked about their participation in educational or training programs since taking the GED. About 45% had participated or were currently enrolled as part- or full-time students. The institutions respondents most frequently enrolled in were community colleges. Respondents were also asked about their future plans for participation in education. Seventy-five percent stated that they planned to enroll in some kind of educational program in the future, with 30% indicating a community college.

This study was limited to educational and employment outcomes. It did not examine participants' other goals, and more personal and affective outcomes of passing the GED test, such as increased self-esteem. Such outcomes should also be considered in an evaluation of a GED program. However, the results of the study did indicate that many people take the GED to get a better job or to qualify for further education or training. About half of the respondents actually did achieve these goals as a result of passing the GED.

Statewide Studies

The most detailed impact study on a state-wide level was ABE in Ohio: A Program Impact Evaluation, conducted in 1977 by David L. Boggs, Terry F. Buss, and Steven M. Yarnell. This study was intended "to determine whether the purposes of the Adult Education Act were being achieved in Ohio ABE programs." The general areas of concern were improvement of occupational status, further assimilation into society, and attainment of personal goals. A telephone survey of former ABE students was conducted three years after they had enrolled in the program. A representative sample, selected according to a multistage random sample design, was drawn from a stratified sample of 12 ABE programs. Of an estimated 3,500 former students (terminated in 1973-74), 1,200 had valid phone numbers or addresses. Interviews were held over a one-month period in 1977. Of the 1,200, only 351, about 21%, were contacted and interviewed. In addition, a control group of persons eligible for ABE, but who had never enrolled, were interviewed.

Academic outcomes of ABE were measured by test results, attainment of educational goals, and participation in and plans for continuing education. Students' beginning and separation grade levels were taken from program records. The mean reading score gain was 1.75 grade levels; the mean math score gain was 3.06 grade levels. The mean hours of attendance was 113 and the median was 88.

Students were asked if they had enrolled in ABE to improve their math, reading, and/or writing skills, and to pass the GED, and whether their goals were met. Over 95% who had wished to improve their academic skills felt that they had. Sixty-two percent stated their goal was to

pass the GED test. Forty percent actually did so.

Interviewees were asked if they had enrolled in ABE to prepare for another educational program, and if so, did the preparation help. They were also asked if they were currently enrolled in an educational program, or if they planned to do so in the future. About 17% of the respondents were currently enrolled in programs such as GED classes, vocational-technical training, and college. Nearly 60% said that they planned to enroll in some kind of educational program in the future. Further ABE or GED classes were most frequently mentioned.

This study measured improvement in economic and occupational status by asking whether participants had obained employment, a better job, increased income, or increased job security since participating in ABE. Sixty-one percent of the participants said that they enrolled to obtain a job or a better job. Over 50% reported they did so. Of the interviewees who were employed, about 40% had received promotions since enrolling in ABE, and almost 65% felt that the chances of keeping their jobs were better. Thirty-four percent said that participating in ABE had helped them increase their income. However, the students' reported change in income, with adjustment for inflation, did not improve their relative financial status.

One of the stated goals of the study was to determine whether ABE students had been "further assimilated into society." Of major consideration were parent/school relationships. Former ABE students were asked if they had school-age children, attended meetings for parents at school, helped children with homework, how many times per week, whether attending meetings and helping children had increased since their participation in ABE, and if they were now more able to talk to teachers.

Over 75% of respondents had school-age children, and at least 65% said they usually went to school meetings and helped children with homework. Since coming to ABE, 79% of the parents said they helped more with homework, 42% said at least 1, 2, or 3 times a week. Since coming to ABE classes, 38% of parents attended meetings at school more often. About 69% said they were better able to talk to teachers and principals since ABE, which seems to reveal an increase in self-confidence. The results indicate that ABE had a positive effect on parents' involvement in their children's education.

Boggs' questionnaire included a variety of questions in regard to participation in social institutions and general social involvement. Former students were asked if they used the library, used social services, were involved in community activities more, about the same, or less since attending ABE. About one third of the respondents indicated that they used the library (30%), and social services more (32%), and were more involved in community activities (33%) since ABE.

Students were also asked if they were registered to vote, if they had voted in 1972 (before or during their ABE class) and in 1976. Voting increased by 6% from 1972 to 1976. Of those not voting in 1976, 25.8%

were registered to vote. The effect of ABE on voting behavior was insignificant.

In terms of students' personal development, the Boggs study primarily focused on whether students' personal educational goals had been met. In addition, respondents were asked if they had hoped to attain the personal goal of getting a driver's license by participating in ABE. Very few indicated that they had such a goal, so no data were reported on this question.

Respondents were asked two questions in regard to application of academic skills: do you read magazines, books, and newspapers, and write letters more, less, or about the same since enrolling in ABE? About 57% said that they read more, and 28.7% said that they wrote letters more often. Former students were also asked if studying and talking to people were easier since ABE, and about 61% said yes in both areas. When asked if they continued friendships made in ABE, almost 70% replied affirmatively.

In general, the results of the study indicate that students' educational goals are being met in ABE programs. There is also some evidence of gains in employment. Effects on parents' involvement in their children's schooling seem positive, but the actual impact on their children's school performance needs further study. Also, more attention is needed to changes in self-concept and attitudes which affect other outcomes such as community involvement. The low response rate of the survey is a problem which may be difficult to overcome in any study which attempts to measure outcomes over an extended period of time.

Another state-wide study, Evaluation of Adult Basic Education in Tennessee, was conducted in 1980 by Paul L. Jones and John R. Petry. This study evaluated ABE programs in Tennessee in terms of program goals and objectives, instruction, and students' perceptions of their relationships with their teachers. Data were also gathered about students' perceptions of the outcomes of their participation in ABE.

Students' perceptions of outcomes were measured by a 26-item instrument with a Likert-type scoring system. The instruments were sent to a sample of 89 programs across the state. Each program director was asked to administer the instrument to 25 students. Thus, the sample was not strictly random. Information was returned from 72 programs--an 80% program response rate. From a potential sample of 2,225, 1,623 usable forms were obtained--a response rate of 72.9%.

The instrument contained statements which were intended to measure change in "quality of life." The statements were based on concepts drawn from the literature in the field of adult education. "Quality of life" was defined in terms of (1) self-expression, (2) self-concept, (3) family life, (4) life in general, (5) leisure, (6) relationships with others, and (7) society. Responses were analyzed according to the characteristics of age, sex, race, level of past education, length of time enrolled in ABE, employment status, and income.

In general, the results indicated that participants felt that ABE had a positive effect on their lives. Overall, respondents perceived an improvement in each area of the "quality of life" assessment. Males, older adults, and students who had been in the program for longer periods of time tended to give the most positive responses. However, the study was limited because the sample consisted only of students currently participating in ABE.

It is not surprising that current participants would feel generally positive about the outcomes of their participation, or else they would stop attending. Data are needed on the perceptions of students who dropped out of the ABE programs. Also, the study is deficient because it provides no information on the benefits of ABE for those students who completed the program or achieved their personal goals. However, the research is significant because it attempted to determine some of the more affective outcomes of participation in ABE.

Perceptions of Program Impact: ABE/GED in Maryland, a 1981 study conducted by Sharon M. Walker, D. Merrill Ewert, and Gene C. Whaples, was similar in terms of shortcomings. The research was based on personal interviews with 120 students from three Maryland counties. The interviews were supplemented by group discussions, classroom observations and case studies. The sampling frame was developed by randomly selecting 26 ABE/GED classes from which five participants were chosen to be interviewed. Again, the study was limited because the sample consisted only of students currently enrolled in an ABE/GED program. People who had reached their goals earlier or who dropped out because the program was not meeting their needs were not included in the analysis. Also, the study was based on students' perceptions only, and included no data on long term outcomes.

Questions regarding changes in participants' lives were grouped into the following categories: changes in economic status, attitudinal changes, changes in personal relationships, and participation in continuing education. Results indicated that the major change attributed to participation was a change in self-concept--89% of respondents reported "feeling different about themselves" as a result of participation in ABE/GED programs. Interviewees also perceived an improvement in basic skills. Seventy-six percent felt that their reading skills had improved, 81% that their writing skills had improved, and 90% that their math skills had improved as a result of attending ABE/GED classes.

This study did not reveal any significant economic changes for participants in ABE/GED programs. However, the limitations of the methodology were recognized in this area. Since the sample was still involved in classes, changes in economic status may not have had time to develop. Interviewees did perceive their future employment prospects to be improved. Eighty-five percent of those unemployed perceived their chances of finding a job to be better.

In conclusion, this study was limited by a sample consisting only of currently enrolled students, many of whom had participated for a short time. However, the results do suggest that improved self-concept was a

major result of participation, even for those students who had not experienced other, more tangible changes.

Local Outcomes Studies

Follow-up studies of special progams and projects have also provided information on the outcomes of participation in ABE. One such study was done of the effects of participation in the New York State External High School Diploma Program on its graduates. A questionnaire was mailed to graduates ten months after they completed the program. As of June 1978, the response to the survey was 60% (387 completed questionnaires).

Questions were grouped into the following categories: learning-related activities, job-related activities, effects on self-concept, and improvement of skills. The most positive responses were in the category of effects on self-concept. More than 82% of respondents reported feeling more positive about their abilities as a result of earning a diploma, and 94% reported an increase in self-confidence. Respondents also reported significant improvement in basic and life skills. A substantial number, more than 78%, expressed interest in continuing their learning. Job-related changes were not as significant, although 52.7% reported a raise in salary. No data were given on the percentage of unemployed graduates who had become employed since receiving their diploma. The utility of the findings is limited because there was no data on unsuccessful program participants.

The Texas Adult Performance Level Project (1979) also surveyed students to demonstrate program effectiveness. The survey consisted of a questionnaire mailed to graduates six months after they received their diploma. Ninety graduates responded to the questionnaire. Data on population size, sample size, and response rate were not given. Again, an improvement in self-concept was the most significant outcome. More than half of the respondents reported feeling "a lot more confident in myself" and 29% said they felt "more confident." Another important outcome was that more than one-third of the respondents had taken further courses after graduation. There was no information on program dropouts.

A study of outcomes was conducted as part of Project F.I.S.T. (Functional In-Service Training), a New Jersey tutorial program for 0-5 readers (Darkenwald, 1983). To collect data about the outcomes of participation, a one page questionnaire was completed, with assistance if necessary, by 51 students. It included questions about the application of reading skills, changes in employment status, and changes in self-concept. About 20% of the unemployed respondents found jobs, and 18% got better jobs. In regard to family life, 33% of parents began to help their children with their homework, and 43% began to read to their children. About 59% began to read the newspaper. As a result of participation in the program, 59% felt better about their skills and abilities, and 61% felt better about themselves in general.

Many of these life changes may have been facilitated by the close relationship between tutor and pupil, and may not have been entirely due to improved reading skills. This type of relationship obviously cannot be developed in most ABE programs. However, for students in this JDRP validated literacy program, the data did reveal substantial positive outcomes, particularly in the area of self-esteem.

Summary

In summary, the past research on the outcomes of participation in ABE has not yielded consistent or conclusive results. However, many studies have indicated that the most dramatic change for students was in self-concept. Going back to school helped many students improve their self-image and gain confidence in themselves and in their ability to deal with other people. Studies also found that most ABE participants made at least some gains in basic skills. These gains were particularly important because the majority of students reported that they enrolled in ABE to achieve educational goals. A large percentage of respondents in numerous studies reported at least partially attaining their personal educational goals.

On the whole, the studies did not reveal notable gains in employment for ABE participants. However, only a small percentage of students reported that their primary reasons for enrolling were employment-related. There were indications that many students see ABE as one step in a process towards economic advancement. Many expressed the desire to continue participation in other educational or training programs.

The quality of much of the research limits the credibility and generalizability of the findings. Few studies were designed or implemented with enough care to obtain accurate information on all important changes which could be directly attributed to ABE. The studies were also handicapped by very low response rates and thus by potentially unrepresentative samples. More research is needed to identify accurately the many outcomes of participation in ABE for the individual, and to assess the impact of ABE on society as a whole. However, this research will be of little value unless greater attention is given to correcting the basic methodological shortcomings noted above.

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CHAPTER III

METHODOLOGY

Introduction

Before describing in detail how the research was carried out, it is important to consider the general issue of design alternatives and the rationale for the choice made in this respect.

The ideal design, of course, would have been a field experiment with random assignment of adult learners to treatment and control groups. Obviously, this was impossible, if only because participation in adult education is voluntary and enrollment open-ended. An actual, rather than hypothetical option, was to employ a "matched" control group design. However, in our opinion and that of experts in research methodology (e.g., Kerlinger, 1964), matching on age, sex, race, school attainment, etc., is not an adequate alternative to random assignment and may even lead to misleading conclusions. There is simply no assurance whatever that all relevant variables are controlled. In the present case, the fact that ABE students voluntarily participate assures that they differ in a significant way from any "matched group" that might be constituted.

An alternative we would have employed, had we the requisite time and money, is the single group with replication design. This design entails drawing two random samples at two different points in time. If the outcome findings are similar, they can be attributed with some confidence to participation in ABE. Stability of findings over time and place indicates, for example, that conclusions are unlikely to be confounded by extraneous events or circumstances (e.g., changes in labor market conditions or population demographics). The design also controls for maturation, which is generally considered the most serious threat to internal validity, particularly in quasi-experimental research. However, when the subjects or respondents are out-of-school adults, it is illogical to expect any maturation effects, such as increased knowledge or ability, due to normal cognitive development not part of the treatment. Put technically, the no-treatment expectation for adults (but not for school or college students) is no change. Thus, even a single group design without replication, which was the option selected given the constraints described above, controls for the major threat to internal validity in research with adults that does not utilize tests or obtrusive treatments.

Since the purpose of the present study was not to test hypotheses or conduct a formal evaluation, most of the validity issues central to the traditional experimental research paradigm are less important than they may seem or even totally irrelevant (e.g., regression toward the mean, testing effects, reactive treatments, and so on.) What we sought to do, and did do, was to obtain factual and attitudinal data from adults concerning their experiences as ABE students. The method employed was the traditional sociological survey. Thus, the technical adequacy of the research should be judged on the basis of criteria utilized by survey researchers rather than experimental psychologists. These have to do mainly with sampling design, response rates, questionnaire construction, respondent recall, inter-rater reliability, and the validity of responses to certain types of items, such as those dealing with sensitive matters. Subsequent sections of this chapter address these issues separately for each of the two component surveys, describing the sampling plans and samples, instrument development, and data collection and analysis procedures.

Sampling Design & Procedures: Outcomes & Impact Component

In New Jersey, adult basic skills education (termed here ABE) encompasses all educational programs for adults deficient in the basic skills, including ability to speak the English language. No official distinctions are made between English language instruction (ESL), instruction geared to the needs of the functionally illiterate (commonly termed ABE), and programming for more advanced students preparing for high school completion via the GED test or the adult high school. Thus, with the exceptions noted below, the study population consisted of all basic skills students enrolled in publicly supported programs sponsored by school districts and community colleges across the state. Exceptions included participants in ESL classes (because of language and cost constraints) and those enrolled in programs for special, atypical populations, namely, prisoners, the mentally ill, the mentally retarded, and the aged. The total population of ABE students, excluding those enrolled in ESL and special programs, was 28, 179 in 1982 (program data for 1983 were not available at the start of the study nor when this report was written.) The total number of ABE programs in the state, subtracting 23 serving only ESL and special populations, was 127.

Sampling Design

Simple random sampling was not possible because a total listing of the population, including addresses and phone numbers, was unavailable. Consequently, the "probability proportionate to size" sampling technique (Babbie, 1973) was employed to select a random sample proportionate to program (cluster) size.

> In the first stage of sampling, each cluster (program) is given a chance of selection proportionate to its size (in number of elements). Large clusters have a better chance of selection than small ones. In the second stage of sampling, however, the same number of elements (respondents) are chosen from each selected cluster. The effect of these two procedures is to equalize the ultimate probabilities of selection of all elements, since elements in large clusters stand a poorer chance of selection within their cluster than those in small clusters. (p. 101)

The formula indicating a given element's (student's) probability of selection using a PPS design follows:

$$\text{Element Probability} = \text{Number of Clusters Selected} \times \frac{\text{Cluster Size}}{\text{Population Size}} \times \frac{\text{Elements Selected Per Cluster}}{\text{Cluster Size}}$$

Applying this formula to the present research, the probability of a given element (student) being selected was .014.

Obviously, to utilize the PPS design, it is necessary to determine the desired sample size and number of programs for the first stage of the sampling process (i.e., selection of sample programs based on cluster size and number of clusters). In the present study, the sample size was set at 400 and the number of programs to be selected at 10. The ideal, of course, is to select the largest possible sample size and as many programs as possible. A sample of 400 distributed over 10 programs was judged the maximum feasible given the constraints of a small budget and a full-time staff of one. Nonetheless, a sample of 400 was sufficient for the study's purposes. Among other things, it was more than adequate to permit sub-group analyses (e.g., by age or sex) without reducing the sub-group N's so greatly as to jeapordize the validity of findings and conclusions.

Sampling Procedures

The sample programs were selected by assigning sequential "cluster numbers" to every program in accordance with its ABE enrollment (rounded as appropriate). A total of 704 such cluster numbers were assigned, with each number representing 40 students (total N = 28, 160 after rounding.) The largest program was assigned 79 cluster numbers; the smallest, one. Finally, from a table of random numbers, 10 three-digit numbers between 001 and 704 were selected in order to complete the first stage of the sampling procedure. Although the first stage sampling design called for selecting 10 programs, 9 were actually selected because one program, due to its large size, was selected twice. Double selection does not violate the principle of randomness inherent in the PPS method. Of course, unlike the other 8 programs, the students (elements) randomly selected from this one totalled 80 instead of 40.

Once a program was selected using the PPS technique, its director was informed of the purpose of the study and asked to participate. All agreed, thus maintaining the integrity of strict random selection. For each of the 9 programs, a "project liaison coordinator" was selected to assist with element sampling and to provide additional data on the characteristics and status of students in the sample (e.g., age, sex, monthly attendance figures). The coordinators comprised the project's Advisory Board and were paid a token honorarium. Their first task was to compile a list of all non-ESL students who were either "continuers" or who had enrolled no later than October 1, 1983, and had completed 12 hours of instruction by November 15, 1983. Students on the lists of "eligibles" were assigned sequential numbers and 40 were selected from each program (80 from the program selected twice) using a table of random numbers.

The October 1 and 12 hours of instruction criteria require some explanation. October 1 was set as the cut-off date in order to allow approximately seven months for program effects to materialize (outcome data were collected in late April and early May). Previous research suggested that this is not only a reasonable time frame, but also "ecologically valid," that is, reflective of program reality since only about 20% of ABE students continue participation from one year to the next (Development Associates, 1980). It is important to note, moreover, that seven to eight months represent the minimum effect parameters. Students enrolled between July 1 and September 30, 1983, and carryovers from the preceding year (N = 71 or 17.8%), were also included in the sample. The twelve hours

of instruction criterion was necessitated by the state's official definition of an ABE participant as a person enrolled for a minimum of 12 hours in a given fiscal year.

Description of Sample Programs

Eight of the nine programs were operated by school districts in Paterson, Plainfield, Perth Amboy, Milltown, Trenton, Union County (a regional district), Jersey City, and Asbury Park. The ninth, situated in Hackensack, was sponsored by Bergen County Community College. Eight of the state's 17 counties were represented in the sample. Program locations represented a mix of large, depressed urban centers (e.g., Trenton, Jersey city, Paterson), small cities with large minority populations (e.g., Plainfield, Hackensack, Asbury Park, Perth Amboy), a rural town in the southern part of the state (Millville), and a middle-class surburban community (Union) located amidst other surburban communities. Total "eligible" ABE enrollees ranged from a low of 143 in Millville to a high of 1,827 in Paterson.

Some of the programs could be characterized as "adult learning centers," emphasizing individual instruction rather than formal classes. Others were more school-like, stressing the traditional classroom approach to ABE instruction. Although large, urban programs were over-represented because they enroll more students, overall the sample seemed to reflect the general make-up of ABE in the state of New Jersey, both geographically and in respect to program characteristics.

Sampling Design & Procedures: Cost-Benefit Component

In order to ascertain the benefits derived from obtaining a high school credential, it was necessary to select a stratified sample representative of both GED and adult high school graduates. These alternative routes to obtaining a diploma are very different. The GED, of course, is simply a test of "equivalency" normed on high school seniors. The adult high school, in contrast, is something like a secondary-level external degree program. Students can earn credit for military and work experience, apprenticeship training, courses provided by employers, proprietary schools, community colleges, etc., skill assessments and tests, and through independent study or attending classes in traditional high school subjects. Compared to GED students, adult high school students are often older, more "settled" community residents. They receive a regular, local diploma rather than a state high school equivalency certificate.

A sample size of 500 was determined to be the maximum possible given available financial resources. It was partitioned to reflect the approximate ratio of GED to adult high school graduates in 1982: 300 GED graduates and 200 adult high school graduates. It should be noted that only those GED graduates who prepared for the test by participating in publicly supported instructional programs were included in the study population.

The 300 GED students were selected using simple random sampling without replacement. The sampling frame consisted of all GED graduates (excluding those who took the Spanish form of the test) who participated in basic skills programs and passed the test between January 1, and April 31, 1982. A four-month frame was deliberately chosen to control for seasonal fluctuations in test-taker characteristics. These time paramters

allowed for roughly 14 to 18 months for "credential" and other effects to materialize. The time frame also minimized two common and serious problems associated with longer follow-up intervals: poor recall and low response rate due to geographical mobility.

A computerized listing of all GED graduates for the period January through April, 1982, was obtained from the state education department. Graduates who had not participated in publicly funded instructional programs were identified on the printout and deleted from the frame. All others (N = 677) were assigned sequential numbers, and 300 were then selected, using a table of random numbers.*

Simple random sampling was not employed to select the sub-sample of adult high school graduates because a listing of the total population could not be obtained. It was necessary, therefore, to utilize the original nine programs randomly selected by the PPS method in order to draw the adult high school sub-sample. Five of these programs (Asbury Park, Paterson, Perth Amboy, Plainfield, and Union County Regional) operated adult high schools and all agreed to supply lists of their 1982 graduates. The five lists were pooled into a master list of 604 graduates; the 604 were assigned sequential numbers, and 200 were selected for the sample, using a table of random numbers.

Instrumentation: Outcomes & Impact Component

To develop the "Adult Education Follow Up Survey" (see Appendix A), the first task was to identify relevant outcome measures. This was accomplished as follows. First, prior outcome studies were scrutinized to determine the relevance, utility, and technical adequacy of their outcome variables and items. This review resulted in our discarding certain variables (e.g., registering to vote) and giving careful consideration to others (e.g., affective outcomes, such as enhanced self-confidence). Next a meeting of practicing ABE teachers and administrators was convened. Using the brainstorming technique, the group generated a list of outcome measures that met the following criteria: (1) Significance, i.e., import for students and society; (2) Relevance, i.e., logical connection to ABE curriculum practices and priorities in New Jersey (APL "competencies" are not a New Jersey priority);

* Subsequent to drawing the GED sample it was discovered that the proportion of graduates who indicated they had prepared for the test through participation in publicly supported programs (14%) departed radically from national statistics pertaining to such preparation. A national follow-up study of GED candidates (Malizio and Whitney, 1980) found that 46% had attended "classes." A similar national study of GED graduates (Cervero, 1983) found that 51% had participated in classroom instruction. Interviews with testing officials clarified reasons for under-reporting, e.g., providing the information is optional, some students view the question as intrusive, and, above all, students fear that, should they not pass, others will know of their failure. State officials estimated that preparation via basic skills programs was at least as prevalent in New Jersey as in other states. Consequently, for certain calculations in Chapter 4, the true population of interest was estimated at 48% of those who passed the test (the 48% figure is the average of the two national statistics noted above).

and (3) Application, i.e., utilization of skills and tangible changes in life circumstances were deemed more important than attitudes or opinions. The resulting list of outcomes, which reflected a consensus of the total group and the researchers, was then categorized into the following general domains: work-related, family-related, community or societal-related, personal growth-related, and academic. The final step in identifying outcome variables involved a thorough review by the project's Advisory Board of the domains and measures previously identified. The Board (also comprised of practicing professionals) concurred with the choices previously made, suggested some minor changes, and helped the researchers prioritize the final list.

The construction of the questionnaire involved a meticulous process of developing, field-testing, and revising successive drafts. Each of three preliminary drafts, as well as the final version, was field-tested with groups of about ten ABE students enrolled in programs not selected for the sample. Special attention was given to the distinctive technical problems of constructing a questionnaire to be administered orally over the telephone. These included clear, natural wording of items, smooth transitions from item to item and section to section, clear formatting as an aid to the interviewers, and careful selection of probes for open-ended items.

A distinctive feature of the questionnaire was the inclusion of a large number of open-ended items. Previous research has relied almost solely on closed, fixed-answer questions that in our view raise serious doubts about the meaningfulness and validity of the responses. We agree totally with Labaw's (1980) position on this matter:

> These types of questions (open-ended) are <u>indispensable</u> to a thorough understanding of complex issues and topics.... Free response or open-ended questions ...are the only way the researcher can give the respondent the opportunity to "have his own say...." The main purpose of an interview, the most important goal of the entire survey profession, is to let the respondent have his say, to let him tell the researcher what he means, not vice versa. If we do not let the respondent have his say, why bother to interview him at all? (p. 133)

Labaw goes on to note that the principal drawbacks of open-ended questions are merely logistical, namely, the time and the professional expertise, and thus money, required to code open-ended answers. Clerks and other non-experts simply cannot do the job. We addressed this issue squarely (albeit with some personal grief): all open-ended questions were coded by the project's director and co-director, both of whom have experience and expertise in ABE and inductive coding techniques.

There is little point in describing the content and format of the questionnaire, which is reproduced in Appendix A, other than to note that it included items not directly related to outcomes, but judged of potential importance for predicting or explaining outcomes. Thus, for example, the instrument includes items on student expectations of the "course," problems they might have experienced, and whether or not enrollment was triggered by a specific life-event.

Reliability and Validity

Validity refers to whether or not a measure (typically a scale or test) actually measures what it purports to measure. In survey research, discrete, self-report items are, in general, assumed to be valid as well as reliable. If an item requires respondents to report factual data (such as age, sex, obtaining a credential), the response is self-evidently valid under most but not all circumstances. One such circumstance is poor recall, which is mainly a function of elapsed time between an event or experience and the posing of the question. We found no evidence that this was a problem in the pre-tests of the questionnaire. Moreover, one would not expect recall to be a problem given the significance to the respondents of participation in ABE and the relatively short elapsed time between experiences or events and data collection.

The validity of responses to sensitive questions is, as noted, problematical. Innocuous phrasing (e.g., "Are you still attending?" instead of "Did you drop out?") was employed to deal with the few sensitive questions that had to be asked. One question (#26) posed special difficulties because of its considerable sensitivity, at least for some people. In effect, it asked if the respondent had been on welfare. Finally, the item was re-worded to minimize its stigma and eliminate the offensive word "welfare." Not a single respondent refused to answer the final version of this question. The remaining threat to validity is the tendency for respondents to give the "expected" or "socially desirable" answers to certain kinds of questions. Examples (though hardly blatant) might be questions 12a, "Do you feel you are doing your job better?," or 22a, "Do you help the children with their schoolwork more than you used to?" There is no way to know for sure if, or to what extent, respondents are less than candid in answering such questions. However, we do know that none of the questions was extremely susceptible to this sort of bias (e.g., similar to asking "Do you believe in Democracy?") and that nearly all of our respondents conveyed to the interviewers an attitude of willing cooperation, seriousness, and candor.

Embedded Scales. The questionnaire contained two embedded scales, one termed PROBDEX (Q.6) and the other KIDDEX (Q. 22a to 22e). The first contained five items concerning "problems adults often experience in going to classes." Inter-item correlations were modest, ranging from .04 to .34 with a mean of .11. Given these correlations, it is not surprising that the alpha reliability co-efficient for the PROBDEX scale was relatively low (.39 for 5 items, .40 with item #4 deleted). A principal components factor analysis (with varimax rotation) suggested that PROBDEX measures two constructs. Lack of progress toward goals and lack of help or attention in class loaded significantly on one factor, while the second consisted of one significant item: "Trouble attending class due to job or family responsibilities." The first factor might be labelled "academic problems," and the second "situational deterrents to attendance." Although low, a reliability of .40 does not preclude the use of PROBDEX as a variable in exploratory analyses.

The KIDDEX scale (5 items) was designed to measure positive changes in parent and child behaviors related to school activities and performance. Inter-item correlations ranged from .20 to .54 with a mean of .37. The alpha reliability co-efficient of .75 was more than adequate for the purposes of this study. A principal components factor analysis resulted in a single factor. All items but one exhibited high factor loadings (.65 to .72). The exception, not surprisingly, was the last item, "Have you become more involved with the school...?" Its factor loading was a moderate .35.

Inductive Coding

As noted above, the open-ended questions were truly open. Response categories were not established prior to data collection. To "allow respondents to have their say" required that all open-ended questions be coded inductively, using the respondents' answers to generate the variables.

The coding process involved the following activities. First, a random sample of 60 completed questionnaires was drawn to provide the raw data. Next, for each open-ended question, all 60 answers were listed on a chalk board (for repeat answers, of which there were many, the first was listed, and the repeats tallied by checkmarks next to it). Following the listing of the initial responses, those with very low frequencies or that were bizzare or inappropriate, were assigned to a catch-all "other" category. Following this initial "clean-up," appropriate or credible responses provided by more than a handful of respondents were retained. Next, semantically identical or conceptually similar responses (e.g., "feel better about myself," "have more self-confidence," "gained self-respect") were collapsed into a single variable or category, in this case "Self-Confidence/Esteem." Finally, each retained category was defined as a variable and assigned a numerical digit for data analysis purposes.

Once the inductive coding was completed, a code book was constructed that set forth not only the final coded variables and the digits assigned to each, but also examples of responses subsumed under the broader code category. For example, the variable "Family Change" as an event triggering enrollment was listed as "2 = FAMILY CHANGE (divorce, baby, marriage, death, kids enter school, empty nest)." This was extremely important in ensuring uniformity in the coding process in its final stage as described below.

The final stage required the two coders (who were senior researchers) to read the transcribed answers to each open-ended question and then code them for key-punching following the scheme set forth in the code book. To resolve any problems of interpretation, the coders worked jointly for several hours, each checking out problems or questions with the other until both were satisfied that consensus was extremely high. The process resulted in minor changes in the codebook to clarify certain variables and their interpretation. Following this initial "debugging" phase, the coders worked independently for a total of more than 30 hours. After all coding had been completed, inter-rater reliability was determined by having each coder independently code a random sample of questionnaires previously coded by the other. The co-efficient of inter-rater reliability was .90, which is remarkably high by any standard.

Instrumentation: Costs and Benefits Component

Response rates to self-administered, mailed questionnaires are almost always low (Kerlinger, 1964). They have been especially low in follow-up studies of GED graduates. Cervero (1983), for example, reported an adjusted response rate of 29% in a follow-up of GED graduates who had previously agreed to participate in the study. Almost surely, a major reason for such a dismal return rate was the fact that Cervero's questionnaire was four pages in length. To try to maximize the response rate, it was decided to limit the benefits questionnaire (titled "Adult Education Study," see Appendix B) to a single sheet with questions printed on both sides.

The benefits questionnaire emphasized tangible outcomes related to employment, income, and public assistance. These economic variables were deemed particularly important because of their presumed relationship to obtaining a high school credential. Obviously, however, a cost-benefit analysis has to take into account potential benefits of a non-economic or human capital investment nature. Thus, following the categorization of benefits described in Chapter 4, items on participation in further education and training, academic skills improvement, self-esteem, and several other key outcome variables identified in the process of developing the initial telephone questionnaire were included in the instrument. Drafts of the benefits questionnaire were subjected to the usual process of trial and revision prior to formulating the final version. Two forms of the final version were produced: one for GED graduates and one for adult high school graduates. They were identical except that references to the GED were deleted from one and to the adult high school from the other. No instruments were used to collect cost data. Sources of cost data and methods of cost analysis (aid formulas and various algorithms) are described in Chapter 4.

Data Collection: Outcomes & Impact Component

The data were collected by telephone interviews, a method increasingly utilized by survey researchers. Telephone interviews, like personal interviews, have many advantages over self-administered questionnaires. Most important perhaps is that the interviewer can, if necessary, clarify questions and use probes, thus securing more complete and accurate data. In regard to the quality of data, Bradurn and Sudman (1981, p. 13) concluded that "there do not appear to be any meaningful differences in response bias between telephone and face-to-face interviews except that...cooperation [in their comparative study of the two methods] was highest by telephone." Another important advantage of telephone interviewing is low cost, especially in comparison with face-to-face interviewing. Telephone surveys also tend to yield higher response rates, especially compared to mailed questionnaires. A disadvantage of telephone surveys is that not every household has a telephone.

Interview Procedures

Prior to actual data collection, the four interviewers (all graduate students in adult education) were briefed and trained by senior project staff. The main sources consulted on telephone interviewing techniques were Surveys by Telephone (Groves and Kahn, 1979) and Asking Questions (Sudman and Bradburn, 1982). After a review of this material, each interviewer conducted several pilot interviews with ABE students who were not part of the study sample. Problems encountered were discussed and resolved during three, three-hour training sessions. Most were merely procedural, for example, handling smoothly complex "skip to" questions. Reviewing the logic behind each "skip to" question and additional practice resolved the initial difficulties.

Interviewers were given batches of questionnaires with the following information filled in on a cover sheet (the "Student Follow-Up Form" described below) and the first page of the questionnaire: respondent's name and telephone number, program name and location, respondent's age and sex (secured from program records), and the names, addresses and telephone numbers of two people identified by the respondent as likely to know "how

we can get in touch with you if you move" (obtained from the "Student Follow-Up Form"). Interviewers were instructed to write answers verbatim in pencil during the interview and then, immediately following the interview, to review each answer for accuracy, clarity and completeness, and to make any necessary revisions. If an answer seemed to require some sort of explanation or interpretation, they were instructed to provide it. Finally, the interviewers provided the following information on the first page of the questionnaire: his or her name, date of interview, start time and finish time. Spot checks of completed questionnaires were conducted periodically to ensure that the interviewers were following instructions.

The majority of interviews were completed after one or two attempts. However, interviewers were instructed to make as many attempts as necessary (not the usual two or three) in order to contact the respondent. The number of attempts ranged from a low of one to a high of 22 (mean = 2.9, median = 2). The duration of the interviews ranged from 8 to 44 minutes, with a mean of 14.5. The bulk were completed in April, 1983, although some (those difficult to contact) were completed in May. All completed questionnaires were reviewed for coding errors (i.e., errors for those items that were in fixed-answer format and pre-coded on the instrument).

Additional data were collected, using standardized reporting forms, by the nine local program coordinators. One such form, referred to above, was the "Student Follow-Up Form" (see Appendix C) which asked for names and telephone numbers of two persons who "will probably know how we can get in touch with you if you move." (This information proved invaluable in locating many students in the sample who had moved -- some interviews were completed by phone calls to Florida, California, and other distant places). The local coordinators explained the need "to keep in touch with our students," administered the form to every student in the sample (or, if that seemed awkward, to all students in a class), and returned the completed forms to Rutgers. In addition, the local coordinators provided the following data on every student in the sample: sex, age, race, level (four reading ability categories based on in-take assessments), and total hours of class attendance by month for the period October through March.

Two hundred ninety-four interviews were completed out of a total sample of 400 for an unadjusted response rate of 74%. The following table presents a breakdown of reasons for the 106 non-completions.

Of the 106 non-respondents, a total of 10 (6 refusals and 4 unable to contact) were valid cases; that is, it was not impossible, at least hypothetically, to secure completed interviews from them. The adjusted response rate, therefore, was 390/400 or 97%. Even the unadjusted rate of 74% is extremely high for a time-lagged survey of low socio-economic status adults. It was far higher than that achieved by any other adult education follow-up study. The adjusted response rate (the figure typically reported by survey researchers) is extraordinarily high by any standard.

Despite a very high completion rate, there remained the possibility that the findings could be biased due to differences between respondents and those who could not be contacted. Consequently, the two groups were statistically compared on the following characteristics: sex, race, reading level at entry, age, and mean number of hours of attendance by month. No

Table 3 - 1

Reasons for Non-Completion

Reason	N	Percent*
Refusal	6	1.5
Deceased	2	0.5
Hospitalized	4	1.0
Moved	15	3.8
Unlisted Number	18	4.5
No Phone	44	11.0
Disconnected Phone	13	3.3
Never Able to Contact	4	1.0

*Based on a total N of 400

differences were found for sex, race and reading level. However, respondents were somewhat older than non-respondents ($t = 4.2$, $p = .001$). The mean age of the former was 30, the latter 25. Moreover, although no differences in hours of attendance were found for October through December, respondents' attendance rates (in hours) were significantly higher for the period January through March (t-test p's ranging from .03 to .001). The age difference may have been due to greater mobility among younger adults, although this is merely a conjecture. The differences in attendance rates reflect "situational" factors (death, hospitalization, moving away) and, probably as well, a decline in motivation among other "uncontactables" with the passage of time. If this is so, and because very young ABE students tend to be less motivated and more dropout-prone than their older counterparts (Smith, 1984), it is probable that the findings are slightly biased toward positive or desirable opinions and outcomes.

Data Collection: Cost-Benefit Component

As noted previously, follow-up data on GED and adult high school graduates were obtained by means of separate, one-page mailed questionnaires. The questionnaires, including pre-addressed, stamped return envelopes, were mailed in June with two follow-up mailings at approximately ten-day intervals. The second and third mailings included a revised cover letter and an additional copy of the questionnaire.

The unadjusted return rate for the combined GED/AHS sample was exactly 50%. Of the 250 respondents, 172 were GED graduates and 78 AHS graduates. The adjusted return rate, calculated by subtracting questionnaires returned by the postal service as undeliverable, was 60.9%. There was a significant disparity in return rates by type of graduate: for GED graduates, the adjusted rate was 70.6%; for their AHS counterparts, it was 46.7%. To keep it as brief as possible, only two "background" items were included in the questionnaire. Thus, the sample can be described only on the basis of these items; namely, age and sex. For the combined group, mean age was 33.2. Females comprised 61.5% of the sample and males 38.5%. By odd coincidence, the proportion of males to females for the GED sub-sample was identical to that of the AHS sub-sample and, therefore, the same as for the combined sample. Mean age was very close for the two groups: for GED graduates, the figure was 33.7 years; for AHS graduates, it was 32.0.

Data Analysis

Standard Errors

In order to generalize from sample to population proportions, it is helpful to know how far off sample estimates are likely to be. The statistic that provides this information is known as the standard error of a proportion. To illustrate, a survey of registered voters may find that 50 percent support candidate X and report a standard error of plus/minus 5 percent. Thus the "real support" for candidate X is somewhere between 45 and 55 percent. Other things equal, the magnitude of the standard error of a proportion is largely a function of sample size.

For the cost-benefit component of this study two samples were drawn, one of GED graduates and the other of adult high school graduates. Fortunately, an appropriate sampling frame of GED graduates was available to permit simple random sampling from the population of interest. Using Kish's (1967) formula for calculating the standard error of a proportion with simple random sampling (and with p set conservatively at .5), the result was a standard error of $\pm$ 3%. For the adult high school graduates, no comparable (i.e., representative) sampling frame existed. The only option was to utilize a list of graduates from the five adult high schools that were operated by programs initially selected by PPS sampling. Although we were able to sample randomly from the list of graduates, from a technical point of view no generalizations can be made to adult high school graduates other than those of the five schools that supplied the list. Using Kish's formula, the standard error for the adult high school data was computed as $\pm$ 5%.

The sample for the telephone survey (n = 294), as previously noted, was selected using a probability proportionate to size (PPS) design (Babbie, 1973). Using the formulas provided by Cochran (1977) for computing the standard error of a proportion for a PPS sample, the result was an SE of $\pm$ 7.7%. The principal reason for the larger standard error of the telephone sample was its relatively small size in relation to the total population of interest. For the purposes of the telephone follow-up component of this study, a standard error of 7.7% is not unduly large. The reported proportions may be somewhat "rough," but at least the extent of their roughness is known. Previous outcome studies employing two-stage sampling designs have either failed to report standard errors or published estimates that, according to our calculations, grossly understate the true standard error.

Data Preparation

As described previously, all completed questionnaires were reviewed and coding errors corrected by the senior researchers. The raw data were then entered onto IBM code sheets, keypunched and verified. As a final step in data preparation, a listing of individual cases was generated by computer in order to identify and correct mechanical errors related to keypunching, coding and card order.

Statistical Treatment

With a few exceptions, the data presented in this report were analyzed using simple descriptive statistics, usually percentage distributions and, occasionally, means and related measures of central tendency. In Chapter 4, *t* and chi square tests were employed to determine if there were statistically significant differences in benefits reported by GED and AHS graduates. The criterion for statistical significance was $p = .05$.

Correlational and ordinary least squares multiple regression procedures were used to explore relationships between background variables (such as total hours of class attendance, age, sex and reading level) and selected outcome measures. Surprisingly, these analyses proved to be of limited utility in predicting the outcomes of participation. In the few instances where multiple regression yielded meaningful insights, the findings are briefly noted.

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CHAPTER IV

COST-BENEFIT ANALYSIS OF DIPLOMA TARGETED PROGRAMS*

This chapter provides an analysis of the costs and benefits of publicly funded, diploma-targeted adult basic skills education programs in New Jersey. The first section provides descriptions of these programs and an overview of the design of the cost-benefit study. The second focuses on the cost and participant data. Recommendations based on the analysis of the cost data are presented next. The fourth section presents the analysis of the benefits of the program. The overall findings, conclusions and recommendations of the cost and benefit analyses conclude the chapter.

State-Funded Adult Basic Skills Programs in New Jersey

The focus of this cost-benefit analysis is New Jersey's state-funded adult basic skills education programs which are targeted at preparing adults who either wish to receive a local high school diploma or a High School Equivalency Diploma by taking the Test of General Educational Development (GED). It does not include an analysis of general adult education. The State of New Jersey provides funding for diploma-targeted adult basic skills education programs through three separate program funding sources: (1) the Adult High School (formerly known as the Accredited Evening High School), (2) the Adult Literacy Program, and (3) the High School Equivalency Program.

The Adult High School is targeted at adults who wish to obtain a regular local high school diploma. State support for this program is provided through the general K-12 education equalization and minimum aid school finance formulas. Adult high school students are counted on September 30 of each year and this figure is used to calculate state aid for the following fiscal year in the same manner as is done for the K-12 student population. The Division of Adult Education within the New Jersey Department of Education is responsible for approving the local districts' adult high schools. State aid to the districts' approved programs is calculated by the Division of Finance of the New Jersey Department of Education using the school finance formulas.

The Adult Literacy and High School Equivalency programs are targeted at adults who, at least eventually, wish to prepare for the Test of General Educational Development (GED). Depending on the needs of the learner, instruction may focus on any combination of the four areas of reading, mathematics, life coping skills, and employability skills. Distribution of state support to local districts is based on evaluation by the Division of Adult Education of annual local district aplications. The Division's evaluation takes into account the availability to local districts of federal basic skills funds in order to maximize the use of available state funds. The Division uses the State Adult Literacy and High School Equivalency funds to provide support for local basic skills programming in English or, to the extent necessary, in the native language of the adult learner. Thus, the Division categorizes its basic skills

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*The cost analysis sections of this chapter were researched and written by R. Stuart Marshall.

programs as (1) English Basic Skills and (2) Bilingual English as a Second Language. Also, for purposes of program management, basic skills programs for adults are organized into four levels according to reading proficiency:

Level I: 0 to 3rd grade reading level
Level II: 4 to 6th grade reading level
Level III: 7 to 8th grade reading level
Level IV: 9 to 12th grade reading level

The Cost-Benefit Analysis Of The Program

The primary purpose of undertaking a cost-benefit analysis of New Jersey's State-funded, diploma-targeted adult basic skills education programs was to answer the question of whether the beneficial effects of the programs outweigh the costs. Theoretically, in such studies both the cost and benefits of the programs are expressed in terms of monetary values so that they can be compared (Levin, 1981, p. 19). Further, under ideal conditions, the appropriate procedure in comparing benefits and costs is to calculate the program's "net present value." That is, all costs and benefits would be adjusted to reflect their worth in the current period (Cohn, 1979, p. 97).

In practice, it is often difficult, some might say impossible, to place a monetary value on the wide array of benefits derived from programs such as adult basic skills. For example, one of the potential benefits of these programs lies in a greater likelihood that participants will encourage school performance among their own children. This benefit is difficult to measure in monetary terms because it is indirect, affecting the participants' children, and because it might have further intergenerational consequences. These problems are formidable, but should not inhibit attempts to compare the costs and benefits of these programs. The analytical framework of cost-benefit analysis is, in itself, an important tool for state policymakers. This framework provides for the systematic identification of both program costs and benefits in order to aid policy makers to better assess the desirability of programs. Even if some of the benefits must simply be identified without a monetary value, knowable costs and quantifiable benefits can be compared and thereby indicate the value that one would need to place on the unquantifiable benefits in order to "bring the program" to a desirable position in the view of a particular policymaker.

The Cost Analysis

In this analysis, the generic term "cost" is used to mean "expenditure" because the term "cost," according to Chambers and Parish (1982a) is defined as:

> the minimum expenditure required to achieve some goal or standard of service or to acquire some well defined commodity or service (p.1)

and the term "expenditure" is defined as:

> the actual outlay for some good or service (p.2)

The key to understanding the difference between expenditure and cost is recognition that a cost is based on a precise definition of a goal or standard of service while an expenditure is not. The state of New Jersey has not based its monetary outlays for diploma-targeted basic skills programs on a defined standard of service. State budget allocations for these programs have been based on the availability of funds in competition with other state funding needs. This is the usual basis for state allocation of funds, but it should be noted because we cannot infer from the "expenditure" data whether these programs should "cost" more or less.

In addition, it should be noted that expenditures at one level of government are revenue at another level. Local districts receive as revenue the state expenditures for these programs and then make independent local expenditure decisions. For example, because the state of New Jersey does not mandate that revenue generated by adult high school students be spent solely on adult high school programs, state expenditures may in fact be more than what is actually spent by the local districts on adult high school programs. Therefore, in addition to the identification of state expenditures for these programs, data will be presented on the extent to which this revenue to the local district is spent on these programs. The review of local expenditures will be limited to an examination of reports on actual expenditures for these programs made by local districts to the state.

With these clarifications, the aim of the cost analysis is to examine New Jersey state expenditures for diploma-targeted adult basic skills programs for fiscal year 1981-82 (latest year for which data were available). State expenditures for each program will be identified in total and on a per-participant basis. Based on local district reports, local expenditures for each program will also be identified in total and on a per-participant basis. The results and further discussion of the cost analysis are presented subsequently.

The Benefit Analysis

The benefit analysis of the New Jersey state-funded diploma-targeted adult basic skills programs has as its base human capital theory. The basic premise of human capital theory is that investment in education will result in higher worker productivity and this higher worker productivity will be rewarded in the labor market with higher earnings (Cohn, 1979, p. 29). As stated by Cohn:

> The basic premise of the human capital approach is that variations in labor income are due, in part, to differences in labor quality in terms of human capital acquired by the workers. Therefore, if one wishes to reduce income inequality, one method to achieve this would be to reduce inequality in the investments people make in human capital (health, education, on the job training, other vocational training, etc.)....This [human capital approach] is consistent with "orthodox" economic theory better known as marginal productivity theory, which argues that wages are determined according to a worker's marginal

> contribution to revenues of the firm, implying that more productive workers will be paid more, other things equal. (p. 28)

A simple description of the process is illustrated in Figure 4.1, where A (investments in human capital) lead to B (higher productivity of workers) which in turn causes C (higher earnings).

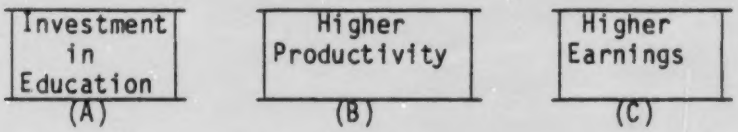

Figure 4.1 The Human Capital Approach

While Cohn recognizes rival theories to the human capital view, he concludes that the evidence in support of it is more than sufficient to merit concentrated attention on this approach (Cohn, 1979, p.32).

Using human capital theory as a base, one would hypothesize that adults who participate in these diploma-targeted basic skills programs will become more productive and, hence, will have higher earnings than they would have if they had not participated, other things being equal. This increased productivity effect could also manifest itself in more hours worked per week, increased proportion of weeks worked per year, and overall greater stability of employment in addition to higher wage rates and higher earnings.

In order to get a broader view of the potential benefits of these programs, a review of recent cost-benefit studies of basic skills programs for adults was conducted and a panel of New Jersey adult educators was consulted concerning a list of potential benefits developed from the literature review. The current study draws heavily from the recent cost-benefit study of the national Job Corps program completed by Mathematica Policy Research, Inc., in 1980. One of the central purposes of the Job Corps program was improvement of the basic skills of young adults (Mathematica Policy Research, Inc., 1980, p. 7).

Chart 4-1 provides a summary of hypotheses of program benefits to participants which were generated from the literature survey and panel review. Following the Mathematica study, these benefits are arranged into three categories of potential effects: (1) employment and earnings, (2) investments in human capital, and (3) reduced dependence on welfare and other public transfers. The hypotheses in Chart 4-1 are based on benefits to the program participants. However, many of these benefits can be viewed as benefits to the larger society: greater employment and higher earnings imply increased tax payments from program participants. A reduction in welfare and other public transfer payments is also beneficial to the public. Increased investment in human capital can have a direct effect on employer decisions to locate in a particular area to take advantage of the improved productivity of workers. While even general estimates of these larger societal benefits are beyond the scope of the present study, the benefit analysis will identify the general implications of the societal benefits of these programs.

Based on the hypotheses on program benefits, a questionnaire was developed. The questionnaire also included items on the participants' evaluation of the program's usefulness. This questionnaire was reviewed by the Division of Adult Education prior to its use. It is described in detail in Chapter III.

Chart 4-1

Summary of Hypotheses Concerning Program Benefits to Participants

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Relative to what would have happened if they had not gone into the program, participants will:

A. Employment and Earnings

1. Have more employment
2. Have more stable employment
3. Have higher earnings/wage rates

B. Investments in Human Capital

1. Be more likely to have productive work experiences
2. Be eligible and more likely to continue on to higher levels of education
3. Be more likely to participate in additional training programs
4. Have better job-seeking skills
5. Have clearer job goals
6. Have an improved self concept
7. Have more confidence in applying for jobs
8. Be more likely to help their children with school work
9. Be better role models for their children

C. Reduced Dependence on Welfare and Other Public Transfers

1. Have reduced receipt of cash transfer payments
2. Have reduced receipt of in-kind transfer payments

The questionnaire was administered by mail to a random sample of 300 GED graduates and 200 adult high school graduates who received their diplomas between January 1 and June 30, 1982.[1] Thus, approximately a year had elapsed between the time of graduation and the time of follow-up. This interval allowed time for program effects to "materialize" while minimizing the severe problems encountered by other researchers in locating adult students for long-term follow-up (Boggs, et al., 1978). Further discussion of the benefit analysis, including the results, can be found in the concluding sections of this chapter.

[1]The ratio of 300 GED graduates to 200 Adult High School graduates is based on the ratio of program participants in 1981-82.

Summary

This study provided an analysis of the expenditures and benefits of New Jersey's three diploma-targeted adult education program funding sources: (1) the Adult High School (formerly known as the Accredited Evening High School), (2) the Adult Literacy Program, and (3) the High School Equivalency Program. Data on expenditures were for the fiscal year 1981-82. State expenditures for each program were identified in total and on a per-participant basis. Also, local expenditures for each program were identified in total and on a per-participant basis. The benefit analysis, which was based on human capital theory, utilized information on potential program benefits. The hypotheses concerning these potential benefits were generated from a review of the literature on similar programs (for example, Job Corps) and were reviewed by experts and local practitioners in the field. A questionnaire addressing these hypotheses was administered by mail to 500 graduates of the programs.

Program Costs

Introduction

The aim of the cost analysis was to examine New Jersey's state expenditures for the following three diploma-targeted adult basic skills education funding sources: (1) the Adult High School (formerly known as the Accredited Evening High School), (2) the Adult Literacy Program, and (3) the High School Equivalency Program.[1] State expenditures for each program were identified in total and on a per-participant basis. Based on local district reports, local expenditures for each program were also identified in total and on a per-participant basis. This section first discusses the participants and costs of the Adult High School program, next addresses the participants and costs paid for by the Adult Literacy and High School Equivalency funding sources, and finally presents the findings, conclusions and recommendations of the cost analysis.

[1]The State of New Jersey also provides funding for adult basic skills education in two other programs, (1) the Supervisors of Adult Education statute, which provides funds to eligible local school districts for partial salary reimbursement, up to a maximum of $12,000, for an adult education supervisor position, and (2) the Evening School for the Foreign Born, which provides a state match with local monies to a maximum of $5,000 for programs targeted for immigrant adults who wish to learn the English language and prepare for the naturalization process. State expenditures under the salary reimbursement statute totaled $638,352 in 1981-82, while state expenditures for the Evening School for the Foreign Born program totaled $203,000 in that same year. The analysis in this report does not include these two programs based on the fact that the former provides support for a supervisor with responsibilities for all adult programs (not just programs aimed at basic skills) while the latter program is aimed at preparation for the naturalization process. The target of our analysis is programs aimed at preparation for awarding of a regular high school diploma or preparation for a High School Equivalency diploma.

The Adult High School

The Adult High School is targeted at adults who wish to obtain a regular, local high school diploma. State support for this program is provided through the general K-12 education equalization and minimum aid school finance formulas. The Education Department's Division of Adult Education is responsible for approving the local districts' adult high schools. State aid for the districts' approved programs is calculated by the Education Department's Division of Finance. State aid to a local district for a particular year is based on the district's September 30th count of full-time equivalent adult high school students--adults are classified as either half-time or full-time students--for the previous year. This is the same procedure used for the general K-12 student population.

Overview of State Aid Formula

State aid per adult high school student is calculated on the same basis as that for K-12 education.[1] It is given out on a sliding scale so that the poorer the district, in terms of property wealth per student, the greater the state's share will be of the district's budget. The sliding scale is based on a guaranteed tax base (GTB) formula. Reock (1982) explains the principle of the New Jersey version of the GTB as follows:

> The equalization support aid formula is designed so that, within certain limits, all districts spending at a given dollar level for each pupil will have the same equalized school tax rate. For instance, under the formula, a community with only $30,000 of taxable property for each pupil could spend $1,900 per pupil and have the same tax rate as a district with $60,000 of taxable property behind each student which is also spending $1,900 per pupil. The State makes up the difference through the device of a "guaranteed valuation." In other words, the State guarantees that the district can tax as though it had an equalized valuation per pupil as high as the State's guarantee. Without this guaranteed valuation, the poorer district in the example would need double the tax rate of the wealthier district in order to support the same level of expenditure. (p. 3)

The guaranteed valuation is set by the State Legislature at a multiple of the state average equalized[2] property valuation per student. This multiple is set by the legislature. Chapter 228, Laws of 1982 set the guaranteed multiple at 1.3235 for 1982-83 (Bureau of Government Research, 1983, p. 40).

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[1]For a more detailed discussion of the New Jersey school finance formula see Goertz (1981), Reock (1982) or Bureau of Government Research (1983).

[2]Equalized here means that it is the value of taxable property in a district adjusted by the New Jersey Division of Taxation to reflect 100 percent of market value.

Reock (1982) goes on to note that about one-third of the state's 602 districts have property tax wealth per student (equalized valuation per pupil) that is greater than the valuation the state guarantees. Under a pure GTB scheme, these districts would be entitled to no equalization aid. However, the Legislature has provided a minimum amount of aid, on a sliding scale of 10 percent to 0, for these districts provided that the district has less valuation than the minimum aid valuation. The minimum aid valuation for 1982-83 is set at 9.5 times the state average valuation (Bureau of Government Research, 1983, p. 40) The few districts with valuations per pupil higher than the minimum aid valuation do not qualify for general purpose aid from the state.

Illustrations of Calculations

In order to estimate the effect of adult high school students on a district's state aid, the impact of these students must be assessed at the margin. This is because two factors that determine state aid to the district are changed simultaneously by the addition of students. To illustrate the marginal state aid effect, a relatively low-wealth district (one below the guaranteed valuation) and a high wealth district (eligible for minimum aid) will be used.

Cinnaminson. Table 4-1 shows the marginal state aid effect for 1982-83 for Cinnaminson School District in Burlington County. Cinnaminson had 11 adult high school students on the roll on September 30, 1981. (Recall that state aid is always based on the prior year's September 30 enrollment count.) This is shown on line A-1. The equalized property valuation for the district was $373,082,250 (Line A-2). With the addition of the 11 adult students, the district wealth per pupil decreased by $480 per student, from $127,812 to $127,332 (Line A-3). The state guaranteed valuation was equal to $181,353 (Line A-4). The aidable budget for districts below the guaranteed valuation is equal to the lower of the district's actual adjusted expenditures[1] in the prior year of the state support limit. The state support limit is the maximum amount per student that the state will share in support with local districts. It varies depending on the grade plan of the district.[2] Cinnaminson is a K-12 district. The K-12

[1]The figure is referred to as the district's Net Current Expense Budget (NCEB). This figure is the district's current expenditures minus federal aid, miscellaneous revenue, surpluses appropriated, and state categorical aid.

[2]The state support limit is set at the 65th percentile of net current expense budget when all districts within a given district are ranked from low to high. The state support limit is calculated and applied separately for six district plans (K-6, K-8, K-12, 7-12, 9-12, County Vocational). (Bureau of Government Research, 1983, p. 86).

Table 4-1

Illustration of Calculation of Marginal State Aid Generated by Adult High School Students in an Equalization Aid District for 1982-83

	With Adults	Without Adults	Difference
A. Parameters			
1. Students	2,930	2,919	11
2. Total Property Value	$373,082,250	$373,082,250	SAME
3. Property Value/Student	127,332	127,812	-480
4. Guaranteed Valuation	181,353	181,353	SAME
5. Aidable Budget	7,566,881	7,566,881	SAME
B. General Aid Calculation			
1. State Aid Ratio	.2979	.2952	.0027
2. Total State General Aid	2,254,174	2,233,743	$20,431
C. Capital Outlay and Debt Service Aid			
1. Guaranteed Valuation	$176,713	$176,713	SAME
2. State Aid Ratio	.2794	.2767	.0027
3. Aidable Capital Outlay	38,100	38,100	SAME
4. Aidable Debt Service	667,196	667,196	SAME
5. Total State Capital Outlay Aid	10,645	10,542	103
6. Total State Debt Service Aid	186,415	184,613	1,802
7. Total State Capital Outlay and Debt Service Aid	197,060	195,155	1,905
D. Total State Aid B2 + C7	$2,451,234	$2,428,898	$22,336

support limit is $2,808 per student. Cinnaminson spent $7,566,881 or $2,583 per student in 1981-82. Because the $2,583 is less than $2,808, the aidable budget is equal to $7,566,881 (Line A-5).

The state aid ratio is based on the following formula:

$$\text{State Support Ratio} = 1 - \frac{\text{District Equalized Valuation per Pupil}}{\text{Guaranteed Valuation}}$$

Substituting with data from the "Without Adults" column in Table 4-1 we have:

$$\text{State Support Ratio} = 1 - \frac{127,812}{181,353}$$

$$= 1 - .7048$$

$$= .2952$$

This state support ratio of .2952 is then multiplied by the aidable budget (Line A-5) to yield a general aid amount of $2,233,743 (Line B-2). If the 11 adult high school students are added to the district student count, the property value per student decreases by $480 (Line A-3), the state aid ratio increases to .2979 (Line B-1), and state general aid increases by $20,431 (Line B-2). Thus, the marginal state general aid generated by the eleven Adult High school students in Cinnaminson totaled $20,431.

In addition, districts below the guaranteed valuation are also eligible for capital outlay and debt service aid. The guaranteed valuation for 1982-83 for the aid is $176,713.[1] Using the same basic formula, the marginal change in state aid for these purposes to Cinnaminson was $1,905 in 1982-83 (Line C-7).

The total marginal state aid generated by the eleven adult high school students in Cinnaminson totaled $22,336 (Line D). This marginal aid to the district was the result of the reduction in property valuation per student due to the addition of the students. The next example shows the marginal impact of adult high school students on a high property wealth (minimum aid) district.

[1]Prior to 1982-83 the guaranteed valuation for general aid, capital outlay and debt service aid was the same. However, Chapter 228, Laws of 1982 increased the guaranteed valuation for general aid while leaving the guaranteed valuation for capital outlay and debt service at the level set by the 1982-83 Budget Act. Capital outlay aid is limited to the smaller of (1) the budgeted capital outlay for the pre-budget year, or (2) 1.5 percent of the sum of the current expense and budgeted capital outlay for the pre-budget year.

Atlantic City. Table 4-2 shows the marginal state aid effect for 1982-83 for Atlantic City School District, Atlantic County. Atlantic City had on its rolls 46.5 adult high school students on September 30, 1981 (Line A-1). The total property value in Atlantic City was $2,519,965,594 (Line A-2). On a per-student basis, the property wealth was $396,876 with the adult students and $399,804 without them (Line A-3). The guaranteed valuation per student for minimum aid districts in 1982-83 was $1,301,776 (Line A-4). In the case of minimum aid districts, the aidable budget is always equal to the student count times the support limit, even in cases like Atlantic City where the district is not spending at the support limit amount (See Table 4-2 footnote).

Table 4-2

Illustration of Calculation of Marginal State Aid
Generated by Adult High School Students
in a Minimum Aid District for 1982-83

	With Adults	Without Adults	Difference
A. Parameters			
1. Students	6,349.5	6,303	46.5
2. Total Property Value	2,519,965,594	2,519,965,594	SAME
3. Property Value/Student	396,876	399,804	-2,928
4. Guaranteed Valuation	1,301,776	1,301,776	SAME
5. Aidable Budget[1]	17,829,396	17,698,824	+130,572
B. General Aid Calculation			
1. State Aid Ratio	.0695	.0693	.0002
2. Total State General Aid	$1,239,143	$1,226,529	$12,614
C. Capital Outlay and Debt Service Aid Minimum aid districts do not qualify for state aid in these categories.			
D. Total State Aid	$1,239,143	$1,226,529	$12,614

[1]This district's actual net current expense budget was $14,159,919, but like all minimum aid districts state aid is based at the maximum support level. The maximum support level in calculations for 1982-83 aid for K-12 districts was equal to $2,808 times the enrolled students. This fact accounts for the difference in the aidable budget ($130,572 is equal to 46.5 times $2,808).

Thus, the aidable budget with the 46.5 adult high school students is $130,572 higher than it would be without them ($2,808 times 46.5 equals $130,572).

The formula for calculating the state aid ratio for minimum aid districts is:

$$\text{State Aid Ratio} = 1 - \frac{\text{District Equalized Valuation per Pupil}}{\text{Minimum Guaranteed Valuation}} \times 10\%$$

Substituting with data from the "Without Adults" column in Table 4-2 we have:

$$\text{State Aid Ratio} = 1 - \frac{399,804}{1,301,776} \times 10\%$$

$$= 1 - .3071 \times 10\%$$

$$= .6929 \times 10\%$$

$$= .0693$$

This state aid ratio of .0693 is then multiplied by the aidable budget of $17,698,824 to yield a state general aid total of $1,226,529. When the 46.5 adult students are added, two changes occur automatically in minimum aid districts: (1) district wealth per student decreases and (2) the aidable budget increases.[1] The reduction in wealth per student, for example, from $399,804 to $396,876 in Atlantic City, thus increases the state support ratio. In the Atlantic City example, the ratio increases by .0002 to .0695 (Line B-1). This increased state aid ratio is then multiplied by the increased aidable budget to yield a state general aid total of $1,239,143 which is $12,614 more than state aid would have been without the 46.5 adult high school students (Line D). Because minimum aid districts do not qualify for capital outlay or debt service aid (there is no minimum aid provision for these categories) the $12,614 is the total marginal state aid to the district generated by the 46.5 adult high school students. This marginal aid was the result of the reduction in property valuation per student and the increase in the aidable budget.

Marginal versus Average Cost

In the preceding analysis, an estimate of the state aid change due to the addition of adult high school students was analyzed at the margin. That is, the change in state aid was estimated from the viewpoint that the adult high school students were the last students added to the total. The analysis of the estimated state aid change has to be made in this manner because the addition of students at the margin lowers the property valuation per student and thus affects the amount of state aid generated for all students, not just the adult high school students. Using the general aid calculation data in Table 4-1, the average state aid "Without

[1]The aidable budget would also automatically increase in a low wealth district if the district were spending at or above the state support limit. In minimum aid districts, however, the aidable budget is always increased because state aid to these districts is calculated at the state support level independent of the actual level of district expenditure.

Adults" is equal to line B-2 divided by line A-1, that is $2,233,743 divided by 2,919. The resultant figure is $765.24. This figure represents the average state aid received in the "Without Adults" situation. When the eleven adult high school students are added, the average state aid increases by $4.10 to $769.34 for all students. The marginal change is equal to $20,431 which consists of $11,967.90--based on the $4.10 increase for the 2,919 non-adult students--plus $8,462.74--the increase for the eleven new (adult) students who receive an average of $769.34. The entire change of $20,431, however, is the direct result of adding on the eleven adult students. Thus, the marginal increase in state aid generated by the adults is the combined effect of the change in the base enrollment and of the additional students.

Once the state aid is received in the district, from the district's viewpoint the average aid is the same for all students, $769.34 in the above example. However, the above example demonstrates that adding students to the base (that is, adding "at the margin") does not simply result in an increase in the average aid per student but instead results in a two-fold increase by (1) qualifying the district for higher aid per student for all of the original students and by (2) applying this new average to the additional students. Thus, to estimate state expenditures for the Adult High School program, the estimate must be made on a marginal basis recognizing that the local district may view the situation from an average basis.

Participants and Expenditures

Data on enrollment in the Adult High School program (Accredited Evening High School) are available from working documents compiled by the Division of Finance within the Education Department. Data on the estimated marginal amount of state aid associated with Adult High School enrollment is not routinely compiled. However, in January, 1982, the Division of Finance did compile and analyze the marginal aid generated by Adult High School students for 1981-82 and also made an estimate of the anticipated marginal aid for 1982-83 (Division of Finance memo, January 19, 1982). The Division of Finance made available this special analysis for use in this study. Local expenditure reports on Accredited Evening Schools are annually collected by the Division of Finance and reported in the Commissioner's annual financial statistical report. (Commissioner of Education, prepublication copy of the Thirtieth Annual Report.) The latest available report is for school year 1980-81. An estimate of the local expenditures for the 1981-82 school year will be made based on the per student estimated change in the regular K-12 education program. The K-12 estimated expenditure increase per student between 1980-81 and 1981-82 was 13.4 percent.[1] To estimate the 1981-82 total local expenditures for adult high schools, the per-student

[1]This estimate was developed from a recently published report by the Bureau of Government Research at Rutgers University (1983). On page 25 of that report, an estimate of New Jersey public school expenditures in current dollars for 1980-81 and 1981-82 is shown. On page 33 of the report an estimate of the number of pupils in average daily enrollment for the same years is given. Combining this information results in an estimated average expenditure of $3,281.71 in 1980-81 and an average of $3,721.94 in 1981-82. The change between years is equal to 13.4 percent.

expenditure total for 1980-81 will be increased by 13.4 percent and multiplied by the September 30, 1981 statewide adult student count.

Table 4-3 presents data on the participants, total state expenditures, per student state expenditure, total local expenditures and local expenditures per student for New Jersey's Adult High School programs. On September 30, 1981 there were 12,311 full-time equivalent students enrolled in Adult High School programs (Division of Finance memo, February 11, 1982). The Education Department's Division of Finance, using the marginal analysis method described above, estimated state aid generated by the prior year's adult students for 1981-82 state aid to total $11,550,503 (Division of Finance memo, January 19, 1982). This state aid is equal to $938.03 per student enrolled on September 30, 1981 (Table 4-3, line B divided by Line A). The estimated local expenditure per adult high school student in 1981-82 is $193.43. This estimate is based on local district reports to the state that show total local expenditures for Accredited Evening Schools for 1980-81 of $1,889,713 (Commissioner of Education, prepublication copy of Thirtieth Annual Report). There were 11,079 students enrolled in adult schools on September 30, 1980 (Division of Finance, New Jersey Education Department, worksheets on adult high school enrollment.) Thus, the average reported local expenditure in 1980-81 was $170.57 ($1,889,713 divided by 11,079). In order to arrive at the estimated per-student local expenditure for 1981-82 of $193.43 (Line D in Table 4-3), the 1980-81 average expenditure is increased by 13.4 percent, the anticipated increase in expenditure for the overall K-12 program between 1980-81 and 1981-82 noted above. This estimated 1981-82 local expenditure was multiplied by the September 30, 1981 student count (Line A in Table 4-3) to arrive at the estimated total local expenditure for Adult High Schools of $2,381,317.

Findings and Conclusions

The data in Table 4-3 indicate that adult high school students generated considerably more state aid per student than the estimated expenditures made by districts on these programs in 1981-82. The average aid generated per adult enrolled on September 30, 1981 was $938.03 compared to an estimated local expenditure (based on local reports) of $193.43 per student. While there is a wide estimated variance in state aid to local expenditure, it should be noted that a certain degree of averaging in state aid formulas is necessary. For example, a gym class of 40 students taught by a new teacher will have a low per-student expenditure need compared to an advanced math class of 10 students taught by a teacher with 20 years of teaching expeience. Analysis of state aid to students in these two classes would show the same state aid per student. Yet, because of the higher class size and lower teacher salary, students in the gym class would show a relatively low per-pupil expenditure and students in the math class would show a relatively high per-pupil expenditure. The average state aid is distributed unequally to pay for the additional cost for the math class. In essence, the low-expenditure gym class subsidizes the high expenditure math class. The data in Table 4-3 indicate that a similar situation exists with the Adult High School program. Because the state of New Jersey does not mandate that revenue generated by adult high school students be spent solely on these students, local districts are using the "surplus" revenue from the Adult High School program to help finance other existing program needs.

Table 4-3

Participant and Expenditure Data for Adult High Schools in New Jersey for 1981-82[1]

A. Full Time Equivalent Students (September 30, 1981 count)	12,311
B. State Aid Generated by Adult High School Students	$11,550,503
C. State Aid per Adult High School Student	$938.03
D. Estimated Local Expenditure per Adult High School Student	$193.43
E. Estimated Total Local Expenditures for Adult High School Students	$ 2,381,317

[1]Sources of data: Line A data is a revised count compiled by the Division of Finance on February 11, 1982. Line B was compiled by the Division of Finance and reported in a memo dated January 19, 1982. Line C is equal to Line B divided by Line A. Line D is based on the reported expenditures for Accredited Evening Schools in the Thirtieth Annual Report of the Commissioner of Education (Commissioner of Education, prepublication copy). This amount is $1,889,713 for 1980-81. The September 30, 1980 count of Adult High School students based on statistics compiled by the Division of Finance was 11,079. Thus, the average local cost was $170.57 ($1,889,713 divided by 11,079). This figure was increased by 13.4 percent (the estimated increase in the K-12 program mentioned above in the text) to arrive at the local estimated expenditure of $193.43 for 1981-82. The $193.43 was multiplied by the September 30, 1981 student count of 12,311 (Line A) to arrive at the estimated local cost for 1981-82 of $2,381,317 shown on Line E.

The situation could, however, result in districts using the Adult High School to generate "surplus" revenue beyond what state policymakers would view as a reasonable exercise of the averaging need. The "surplus" revenue situation may help explain the 18.3 percent growth in adult high school enrollment between September 30, 1980 and September 30, 1982 while regular school enrollment (and associated state aid) declined by 5.9 percent.[1]

Recommendations

Because verification of expenditures reported by local districts for the Adult High School is beyond the scope of this study, it is recommended that the Department of Education verify these reported expenditures. If the Department of Education confirms substantial "surplus" revenue beyond what state policymakers view as a reasonable exercise of the averaging need, it is further recommended that the Department of Education (1) establish a "standard of service" for the Adult High School program, (2) develop a separate funding formula for the Adult High School program based on the established "standard of service," and (3) require separate local district accounting for the Adult High School program with provisions to ensure that state aid received in the local district for the program be spent only for that program, with surplus revenue to be returned to the state.

Adult Literacy and High School Equivalency Funding Sources

The Adult Literacy and High School Equivalency programs are targeted for adults who wish to prepare for the Test of General Educational Development (GED). Distribution of state support to local districts for this type of program is based on evaluation of annual district applications to the Education Department's Division of Adult Education. In order to maximize the use of available state funds, the Division's evaluation takes into account the availability to local districts of federal basic skills funds. The Division utilizes the State Adult Literacy and High School Equivalency funds for local basic skills programming in English or, to the extent necessary, in the native language of the adult learner. Thus, the Division categorizes its basic skills programs as (1) English Basic Skills, (2) Bilingual Basic Skills, and (3) English as a Second Language. Also, for purposes of program management, basic skills programs for adults are organized into four levels according to reading proficiency. These levels are as follows:

[1]The Division of Finance reported Adult High School enrollment of 13,111.5 on September 30, 1982 compared to 11,079 on September 30, 1980. See Bureau of Government Research, 1983, p. 33 for average decline of K-12 average daily enrollment.

Level I: 0 to 3rd grade reading level

Level II: 4 to 6th grade reading level

Level III: 7 to 8th grade reading level

Level IV: 9 to 12th grade reading level

Algorithm Needed to Estimate Expenditures per Participant

State expenditures for Adult Literacy and High School Equivalency support are reported in the annual Governor's Budget. However, because the Division of Adult Education combines state funding with available federal basic skills funding and because the program at the local level serves all GED students in one setting independent of the funding source designation (federal or state), an algorithm is needed to (1) estimate state support across the three available program options (English Basic Skills, Bilingual Basic Skills and English as a Second Language), and (2) separate state-supported from federally-supported students within each program option.

Expenditures

Table 4-4 summarizes the known amounts of federal and state support for the three program options. Line 1 in Table 4-4 shows the Governor's Budget total of expenditures for the Adult Literacy and High School Equivalency programs for 1981-82. Line 2 shows total federal and state expenditures for each of the three program options. The Division of Adult Education estimated that $137,930 of the State Adult Literacy expenditure was used for the English as a Second Language program with no funds from the High School Equivalency source for that program option. This figure is shown on Line 3. The Division further provided a breakdown of federal and state expenditures for the Bilingual Basic Skills program for 1981-82. This estimate was developed from a review of each individual district's budget. The federal and state totals are shown on Lines 4-A and 4-B in Table 4-4.

Table 4-5 presents the algorithm used to estimate federal and state expenditures for the English Basic Skills program option using the known data shown in Table 4-4. Line 1-C shows the total 1981-82 federal and state expenditures for English Basic Skills and Bilingual Basic Skills programs. This is the same as that shown in Table 4-4, Lines 2-A and 2-B. Shown on Line 2-C is the total state expenditure for English Basic Skills and Bilingual Basic Skills, given the fact that in Table 4-4, Line 3 only $137,930 of the total of these programs was used for the English as a Second Language Program option. Table 4-5, Line 3 shows an estimate of total federal funds for the English Basic Skills and Bilingual Basic Skills programs. That estimate is equal to Line 1-C less Line 2-C in Table 4-5. Given the estimate of federal funds spent on Bilingual Basic Skills from Table 4-4, Line 4-A, an estimate of federal funds for English Basic Skills program support is made on Line 4-C in Table 4-5. An estimate of state expenditures for English Basic Skills program support then is made on Line 5-C in Table 4-5. Using the algorithm we have thus made it possible to estimate federal and state expenditures for each of the three program options.

Table 4-4

Known Amounts of Federal and State Expenditures for the English Basic Skills Program, Bilingual Basic Skills Program and English as a Second Language Program for 1981-82

1. State Expenditures 1981-82 (Governor's Budget)[1]		
A. Adult Literacy		$ 979,154
B. High School Equivalency		1,214,606
	Total	$2,193,760
2. Total 1981-82 Federal and State Expenditures for the Program Option[2]		
A. English Basic Skills		$3,258,215.68
B. Bilingual Basic Skills		408,461.80
C. English as a Second Language		1,180,594.02
	Total	$4,847,271.50
3. State Total of Adult Literacy Funding Used for English as a Second Language in 1981-82[2]		$ 137,930.00
4. Breakdown of Federal and State Expenditures for the Bilingual Basic Skills Programs for 1981-82[2]		
A. Federal subtotal		$ 89,765.00
B. State subtotal		318,696.80
	Total	$ 408,461.80

[1]Data from Governor's Budget for Fiscal year 1983-84 (State of New Jersey, January 31, 1983, p. 334). Adult Literacy total includes $171,113 transferred to Department of Higher Education. High School Equivalency total includes $138,056 transferred to Department of Higher Education.

[2]Data made available by Richard Hitt, Division of Adult Education.

Table 4-5

Algorithm to Estimate the Unknown Amounts of Federal and State Expenditures for the English Basic Skills Program, Bilingual Basic Skills Program and English as a Second Language Program for 1981-82

1.	A. English Basic Skills Program	$3,258,215.68
	B. Bilingual Basic Skills Program	408,461.80
	C. Total English and Bilingual Basic Skills Programs	$3,666,677.48
2.	State Total for English Basic Skills and Bilingual Basic Skills Programs	
	A. Adult Literacy ($979,154 less $137,930)	$ 841,224.00
	B. High School Equivalency	1,214,606.00
	C. Total State Expenditures for English Basic Skills and Bilingual Basic Skills Programs	$2,055,830.00
3.	Estimated Federal Funds for English Basic Skills and Bilingual Basic Skills Programs (Line 1-C less Line 2-C above)	$1,610,847.48
4.	Estimated Federal Funds for English Basic Skills Program	
	A. Line 3 above	$1,610,847.48
	B. Less Line 4-A, Table 4-4	89,765.00
	C. Equals Federal Funds for English Basic Skills Program	$1,521,082.48
5.	Estimated State Expenditures for English Basic Skills Program	
	A. Federal and State Basic Skill Amount (Line 1-A above)	$3,258,215.68
	B. Less Estimated Federal (Line 4-C above)	1,521,079.48
	C. Equals Estimated State Expenditure for English Basic Skills	$1,737,133.20

Participants

As mentioned above, the Division of Adult Education organizes its programs into four levels according to reading proficiency. At the local level, participants are not placed according to funding source but rather in accordance with their educational need (as defined by the reading proficiency level). Participant data, therefore, is available only by reading proficiency level. The task is to decide how to estimate the number of participants being supported with state funds as compared to the number being supported with federal funds.

After discussion with the Division of Adult Education, it was decided to count all participants at levels I and II as federally-supported students and all participants at levels III and IV as state-supported students. The basis for this is the decision to consider federal dollars as the ones being used for students with the greatest educational need while the state dollars are being used to support students who are closer to the point of taking their GED exam. However, sufficient data will be reported in order to allow sensitivity analyses of alternative assumptions on the appropriate distribution of program participants.

Because the Division does not apply the four levels of proficiency to the English as a Second Language program option, it was decided to allocate participants in that program on the basis of relative percentage of federal versus state support. Total federal and state support for that option was $1,180,594.02 of which only $137,930 or 11.7 percent was state of New Jersey funds. Therefore, 11.7 percent of the participants in the English as a Second Language program were considered state-supported.

Participants and Expenditures

Table 4-6 presents data on (1) the 1981-82 federal, state and local expenditures in total and for each of the three program options, (2) the estimated number of participants in each option by funding source, and (3) the cost per participant by program option and in total. For both the English Basic Skills and Bilingual Basic Skills programs, the federal/state allocation of participants is based on a decision to consider all level I and II students as being federally supported and all level III and IV students as state-supported. Thus, the 9,145 level I and II students in the English Basic Skill option in 1981-82 are considered to be receiving federal support. In reviewing the data in Table 4-6, note that the figures in the "Total" column do not always represent the sum of the three preceding columns. For instance, the Total Participants is always the same as the Local Participants which is the sum of the Federal and State columns. Also, the total Expenditures/Participants is the overall average rather than the sum of averages of the preceding columns.

Overall, the $2,193,760 in state expenditures spent on all three options helps to provide program support for an estimated 18,175 participants. This is an average state expenditure of $120.70 per participant (see second column on Line 4 in Table 4-6). Local districts reported spending an additional $32.34 per program participant. Thus, the state/local cost is an estimated $153.04 per participant. This figure is almost identical to that found for the federal/local Expenditure for the estimated 22,065 participants identified as having primarily federal support. That combined figure is $152.59.

Table 4-6

Federal, State and Local Expenditures for GED Targeted Adult Basic Skills Education Programs in New Jersey 1981-82[1]

Program Option	Expenditures and Participants			
	Federal	State	Local	Total
1. English Basic Skills				
Expenditures	$1,521,082.48	$1,737,133.20	$ 966,491.87	$4,224,707.55
Participants	9,145	15,251	24,396	24,396
Expenditures/ Participants	$ 166.33	$ 113.90	$ 39.62	173.17
2. Bilingual Basic Skills				
Expenditures	$ 89,765	$ 318,696.80	$ 128,339.20	$ 536,801
Participants	928	1,335	2,263	2,263
Expenditures/ Participants	$ 96.73	$ 238.72	$ 56.71	$ 237.21
3. English as a Second Language				
Expenditures	$1,042.664.02	$ 137,930	$ 206,609.08	$1,387,203.10
Participants	11,992	1,589	13,581	13,581
Expenditures/ Participants	$ 86.95	$ 86.80	$ 15.21	$ 102.14
4. Totals				
Expenditures	$2,653,511.50	$2,193,760	$1,301,440.15	$6,148,711.65
Participants	22,065	18,175	40,240	40,240
Expenditures/ Participants	$ 120.25	$ 120.70	$ 32.34	$ 152.80

[1]Data Sources: For federal and state expenditure data see Tables 4-4 and 4-5. Local expenditure and participant data from Richard Hitt, Division of Adult Education based on March 31, 1983 computer printout. See text for allocation of participants within programs.

Findings and Conclusions

The review of the data in Table 4-6 yields no unusual findings. The most striking statistic is the overall closeness of the state and federal expenditure per participant. That finding could be attributable to the application approval process of the Division of Adult Education in which they take into account the availability of federal funds in the allocation of state dollars. However, that conclusion is really beyond the limitations of the data presented in Table 4-6.

Recommendations

It is recommended that the data in Table 4-6 be reviewed and verified by the Department of Education. It is further recommended that the Division of Adult Education keep a separate record of federal and state allocations to local school districts. Currently, the Division's computer records show a combined federal/state total. For purposes of ease of analysis, it would be desirable to show a separate record of the state and federal funds. The fiscal data in Table 4-6 are expenditure data. Like the the Adult High School program, the GED-targeted programs do not have an established "standard of service." While the issue of state support to local expenditure has not risen in the GED-targeted program area as it did in the Adult High School program, it is nonetheless desirable to establish a "standard of service" for the GED-targeted programs. Without such a standard, the "cost" of these programs is not determinable. It is, therefore, further recommended that the New Jersey State Department of Education establish a "standard of service" for the GED-targeted programs. This task could very easily be completed at the same time that the standard for the Adult High School is established (see recommendations under Adult High School). Once a standard is determined, the desired level of state/local share of the cost of the program can be established.

Summary

The aim of the cost analysis was to examine New Jersey's state expenditures for 1981-82 for the following three diploma-targeted adult basic skills education funding sources: (1) the Adult High School (formerly known as the Accredited Evening High School), (2) the Adult Literacy program, and (3) the High School Equivalency program. State expenditures for each program were identified in total and on a per-participant basis. Local expenditures for each program were also identified in total and on a per-participant basis.

Adult High School

It was found that adult high school students generate considerably more state aid per student than the estimated expenditures made by the districts on these programs in 1981-82. The total state aid generated for programs for the 12,311 adults enrolled on September 30, 1981 totaled $11.55 million. The estimated local expenditures on programs for Adult High Schools that year was $2.38 million. On a per-participant basis, state aid totaled $938.03 while estimated local expenditures (based on local reports) totaled only $193.43 per student. Because the state of New Jersey does not mandate that revenue generated by the Adult High School students be spent soley on these students, local districts are using the "surplus" revenue from the Adult High School program to help finance other

existing program needs. The "surplus" revenue situation may help explain the 18.3 percent growth in Adult High School enrollment between September 30, 1980 and September 30, 1982 while regular school enrollment (and associated state aid) declined by 5.9 percent.

Based on the cost analysis of the Adult High School program the following recommendations are made:

(1) The Department of Education verify the reported local expenditures for the Adult High School program.

(2) The Department of Education establish a "standard of service" for the Adult High School program.

(3) The Department of Education develop a separate funding formula for the Adult High School program based on the established "standard of service," and

(4) The Department of Education require separate local district accounting for the Adult High School program with provisions to ensure that state aid received in the local district for the program be spent only for that program and any surplus revenue should be returned to the state.

Benefits Analysis

A full description of the methodology employed to secure data on the benefits of obtaining a high school credential is provided in Chapter 3. Here the concern is with reporting the findings so that judgments can be made concerning outcomes and impact in relation to costs.

Benefits must be viewed from two rather different perspectives. The first, what might be called the micro perspective, emphasizes the benefits gained by sub-groups of the population and thus sheds light on program effectiveness in meeting individual or sub-group needs. The second, or macro perspective, addresses outcomes without reference to the specific needs or goals of individuals or sub-groups and thus provides a picture of overall outcomes or program impact. To illustrate this distinction, consider the benefit of obtaining employment. From the micro perspective, this outcome is meaningful only to that sub-group of the population consisting of persons who were unemployed and seeking employment prior to graduation. This sub-group experienced significant gains in employment, suggesting that the program was effective in meeting their need. However, from the macro perspective, gains in employment were relatively modest. The reason is that the majority of the population were employed both prior to and after graduation. Thus, overall, there was limited potential for employment gains. Both perspectives, of course, are valid; they simply emphasize different kinds of information.

The findings are organized and reported in two general sections, the first dealing with micro benefits and the second with macro benefits or overall impact.

Micro Benefits

Because the GED and AHS samples were drawn from different populations, from a strictly technical point of view findings for each group should be reported separately. To do so, however, would be exceedingly cumbersome and detract from our purpose of providing an overall picture of benefits gained, regardless of type of credential. Consequently, the micro analysis is based on the combined data from the two samples. The reader is cautioned that the findings are only suggestive of inferences that might be made to the total population of interest.

These findings, and all others, are organized under the previously discussed general categories of (1) Employment and Earnings, (2) Reduced Dependence on Welfare and Other Public Transfers, and (3) Investments in Human Capital. Following the data for the combined sample, outcomes for the adult high school and GED graduates are compared. Only statistically significant differences are reported. The section concludes with an analysis of graduates' perceptions of the value of the adult high schools and GED programs in helping them attain a high school credential.

Macro Benefits

To reiterate, the macro perspective provides information on benefits for the overall population without regard to sub-group differences in needs or goals. This is the kind of information typically reported in outcome studies. Success is judged on the basis of achievement of officially stated objectives, which are presumed to be relevant to the entire population. Outcomes or benefits are typically equated with overall program impact.

In determining what findings to report in respect to macro benefits, the decision was made to adhere to conventional scientific criteria, that is, not to aggregate the data from the GED and AHS samples. Thus, findings are reported only for the GED sub-group. We view this as the preferred alternative for the following reasons: (1) the AHS sample is small and not strictly random; inferences can only be made to the limited population from which the sample was drawn; (2) the majority of adults in New Jersey earn GED rather than adult high school diplomas; (3) the GED sample was drawn randomly from a large and representative population; moreover, its standard error is known ($\pm$ 3%), thus allowing for some precision in estimating population values; (4) finally, the actual number of GED graduates for fiscal year 1981-82 is known, thus permitting estimates of outcomes in terms of actual number of graduates.

In order to make the estimates in Section 2, certain assumptions and adjustments had to be made. First it was assumed that adults who passed the GED test between January 1 and April 31, 1982 (the sampling frame) were representative of those who passed during the other months of fiscal year 1981-82. In regard to adjustments, only that proportion of the total (48%) estimated as having prepared for the GED by participating in adult basic skills programs was included in computing estimates. Secondly, those who passed the Spanish form of the test (17%) were excluded from the calculations. Thus, the total population of GED graduates (7,671) was adjusted downward to 3,056.

Section 1: Micro Findings

The findings presented below are based on the combined GED and AHS sample data. For the sake of parsimony, they are presented as simple percentages. For items applicable to all respondents, such as most of those in the Human Capital category, percentages were calculated from a base of 250. For all other items, the base N varied depending on the size of the relevant sub-group (e.g., those with children, those employed, etc.)

Employment and Earnings Twelve to Eighteen Months After Graduation

1. Of graduates initially unemployed and seeking employment, 58.3% obtained jobs. This gain is somewhat offset by 14.8% who were initially employed but became unemployed.

2. Of graduates initially employed part-time, 44.1% obtained full-time employment. This gain is slightly offset by 7.1% who were initially employed full-time but subsequently became employed part-time.

3. Of graduates initially employed and still employed at the time of the follow-up, 44.6% reported that they obtained better jobs.

4. Of graduates initially employed and still employed at the time of the follow-up, 93.1% reported an increase in earnings.

5. Of graduates initially employed and still employed at the time of the follow-up, 29.0% reported that they had received a job promotion.

6. Of graduates initially employed and still employed at the time of the follow-up, 77.8% reported that they were more likely than before to keep their jobs.

7. Of graduates initially employed and still employed at the time of follow-up, 76.2% reported that they are now able to do their jobs better.

Of the seven benefits above related to employment and earnings, 100% of the graduates reported at least one benefit, 50.4% reported three or more benefits, and 13.3% reported five or more benefits. It should be noted in addition that the average number of months employed in the 12-month period prior to graduation was 7.7, compared to 9.0 after graduation. Specific findings related to increased earnings are listed below.

1. For graduates employed full-time, both initially and at the time of the follow-up (N = 35), the mean weekly increase in take-home pay was $63.72.

2. For graduates employed part-time, both initially and at the time of the follow-up (N = 103), the mean weekly increase in take-home pay was $33.50.

3. For graduates initially employed part-time who had gained full-time

employment by the time of the follow-up (N = 74), the mean weekly increase in take-home pay was $87.73.

4. For the total sample (N = 250), the mean weekly increase in take-home pay was $26.18. This can be extrapolated to a cumulative annual gain in take-home pay of $341,675 for the total sample.

Reduced Dependence on Welare & Public Transfers
Twelve to Eighteen Months After Graduation

1. Of the graduates who had initially received welfare payments and public transfers (e.g., food stamps), 51% received no public assistance at the time of the follow-up. This gain is slightly offset by 4.7% who had not received public assistance prior to graduation but did at the time of the follow-up.

Investments in Human Capital Twelve
to Eighteen Months After Graduation

Since earning their high school credential:

1. 29.3% of graduates enrolled in college*.

2. 30.9% enrolled in a job training program or a trade or technical school.

3. 86.5% reported improvement in their reading, writing, or math skills.

4. 95.6% of those with children reported that they now set a better example for their children.

5. 66.5% reported that they now know more about how the government works.

6. 92.8% reported that they now feel better about themselves.

Of the six benefits above related to investments in human capital, 100% of the graduates reported at least one benefit, 85.3% reported three or more benefits, and 22.9% reported five or more benefits.

Comparison of Benefits for GED
& Adult High School Graduates

The AHS graduates were less socioeconomically advantaged than their GED counterparts. To illustrate, 55% of AHS graduates were unemployed prior to graduation compared to 36% of GED graduates. In addition, twice as many AHS graduates (32% vs. 16%) received public assistance in the 12 months before obtaining a diploma. Given these discrepancies in socio-economic circumstances, one might expect to find substantial differences in outcomes favoring the GED group. This was not the case. Only three statistically significant differences were observed. The first, related to

*Data reported in Chapter 5 suggest that the overwhelming majority enrolled in two-year community colleges.

public assistance, is not surprising in light of the initial discrepancies between the groups. The second is relatively trivial and probably accounted for by the emphasis on civics in the typical AHS curriculum. The third is difficult to interpret.

The two groups differed as follows:

1. In the twelve to eighteen month period following graduation, only 7.9% of GED graduates received some form of public assistance compared to 26.3% of AHS graduates ($X^2 = 14.8$, df = 1, p = .0001).

2. A slightly greater proportion of AHS graduates (76.6%) than GED graduates (61.9%) reported knowing more about how the government works since earning their diploma ($X^2 = 5.1$, df = 1, p = .02)

3. A greater proportion of AHS graduates (90.0%) than GED graduates (70.4%) reported that they are now able to do their jobs better ($X^2 = 4.5$, df = 1, p = .03).

Opinions of Graduates
Concerning GED and AHS Programs

Although not directly related to benefits obtained by securing a high school credential, graduates' views of the value of GED and AHS programs are pertinent to a general assessment of program efficacy and need and thus to the issue of "benefit" in its broad sense.

GED graduates were asked to rate their extent of agreement/disagreement with the following statements. "Strongly Agree" was scored 4, "Agree" 3, "Disagree" 2, and "Strongly Disagree" 1.

1. The classroom instruction I received was very helpful in preparing me to take the GED test.

2. I would not have taken the GED test if the adult education program I attended had not been available.

The mean score for the first item was 3.7 (SD = .93), indicating a strong degree of agreement with the statement posed. For the second item, the mean was 3.2 (SD = .93), closer to "Agree" than "Strongly Agree," but nonetheless quite positive.

AHS graduates were posed the following equivalent questions using the same agree/disagree format and scoring system.

1. The adult high school I attended was very helpful in preparing me to earn my diploma.

2. If the adult high school was not available to me, I would not have earned a diploma.

The mean for the first item was 3.6 (SD = .68), indicating strong agreement with the statement posed. The mean for the second item was only slightly lower (3.4, SD = .79).

It can be concluded that the great majority of GED and AHS graduates placed a high value on the instruction they received, and agreed that they would not have earned their diplomas had they been denied access to an appropriate adult education program.

Section 2: Macro Findings

The findings below are based on the GED sample data. Technically, they can only be generalized to the population of adults who passed the English version of the GED test between January 1 and April 30, 1982, and who indicated on the test form that they had participated in a state-sponsored adult basic skills education program. For this sample, the standard error of measurement for inferences to population proportions is ± 3%. However, as noted previously, it is reasonable to assume that the January to April graduates were unlikely to differ significantly from the graduates who passed the test during the other eight months of fiscal 1982. Thus, in projecting raw numbers, the 12-month adjusted total of 3,056 was utilized as the base.

Employment and Earnings Twelve to Eighteen Months After Graduation

An estimated total of:

1. 391 (12.8%) obtained employment.
2. 2,677 (87.6%) increased their earnings.
3. 587 (19.2%) obtained a better job.
4. 348 (11.4%) were promoted on the job.
5. 1,008 (33.0%) reported they were more likely to keep their jobs.
6. 1,008 (33.0%) felt they were better able to do their jobs.

In regard to earnings:

1. For graduates employed full-time, both initially and at the time of follow-up, the mean weekly increase in take-home pay was $66.67.
2. For graduates employed part-time, both initially and at the time of follow-up, the mean weekly increase in take-home pay was $28.33.
3. For the total sample, the mean weekly increase in take-home pay was $29.87. This can be extrapolated ($29.87 x 52 weeks x 3,056) to a cumulative annual gain of $4,746,701.

Reduced Dependence on Welfare and Public Transfers Twelve to Eighteen Months After Graduation

1. An estimated total of 581 (19.0%) were removed from welfare and other public transfer programs, such as Food Stamps.

Investments in Human Capital Twelve to Eighteen Months After Graduation

An estimated total of:

1. 953 (31.2%) enrolled in college.
2. 840 (27.5%) enrolled in a job training program or a trade or technical school.
3. 2,582 (84.5%) improved their reading, writing, or math skills.
4. 1,953 (63.9%) reported they now set a better example for their children.
5. 1,892 (61.9%) reported increased knowledge of how the government works.
6. 2,879 (94.2%) reported they now feel better about themselves.

Summary and Conclusions

In 1981-82 there were 12,311 adults enrolled in adult high schools (AHS). Total state revenue to local school districts for AHS programs was $11.55 million. However, only $2.38 million or $193.43 per participant was actually spent on the AHS programs at the local level. During the same year there were 18,175 participants in GED-targeted adult basic skills programs. It was found that the state spent $2.19 million on these programs or about $121.70 per participant. Local districts reported spending an additional $32.34 per participant.

In order to determine whether the beneficial effects of these programs outweigh the cost to the state, a questionnaire aimed at identifying the potential benefits of these programs was developed. The questionnaire was administered to recent graduates of the state-supported programs to determine if the hypothesized benefits of the programs were actually realized by the participants.

What we found in terms of benefits were the following:

- Participants in both AHS- and GED-targeted programs found the instruction they received to be very helpful in preparing them to earn their diplomas.
- Participants agreed that if the programs did not exist, they would not have earned diplomas.
- Graduates reported gains in employment, increases in earnings, increased likelihood of keeping jobs, and improved performance on the job after completing the program.

. Graduates reported furthering their education beyond high school, improving their reading, writing and math skills, being better role models for their children, and greatly enhancing their self-esteem.

The results of this study indicate to policymakers that state expenditures on diploma-targeted programs are viewed by graduates as needed and that these programs have positive effects across a wide spectrum of outcome measures. As stated at the beginning of this chapter, it is difficult to place a monetary value on this array of benefits. Setting a value on increased employment, reduced dependence on welfare, further improvement in education, or benefits to the children of program graduates is a matter of judgment and cannot be arrived at objectively.

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CHAPTER V

OUTCOMES OF PARTICIPATION IN ADULT BASIC EDUCATION

Introduction

The previous chapter was concerned with some of the same questions addressed in this one. However, Chapter 4 dealt not only with a different population, but its purpose and focus were much narrower, namely, to analyze costs and benefits associated with New Jersey's high school completion program. Data on benefits were secured by a one-page mailed questionnaire completed by GED and adult high school (AHS) graduates twelve to eighteen months after obtaining their diplomas. It was assumed that many of the reported benefits were directly related to obtaining a high school credential.

The present chapter, in contrast, reports the findings of in-depth interviews with a random sample of 294 ABE students enrolled between October, 1982, and April, 1983. Although the emphasis of the interviews was on outcomes attributable to program participation between October and April, attention was given to probing other aspects of students' experiences. For example, questions were asked concerning reasons for participation, perception of the educational process, and factors influencing discontinued attendance. The intention in asking these kinds of questions was to provide a broader context for analyzing and interpreting the findings related to outcomes.

The present chapter is organized as follows. The first section provides a sociodemographic profile of the survey respondents. Next, findings related to the "context" questions, such as those listed above, are presented. In the third section outcomes are presented in the following order: (1) employment-related changes; (2) acquisition and application of basic skills; (3) further education and training; (4) reduced dependence on public assistance and (5) personal and family effects.

A detailed description of the methodology of this component of the study can be found in Chapter 3.

Characteristics of Respondents

Data comparing selected characteristics of respondents with non-respondents are reported in Chapter 3. Table 5-1 below presents a fuller sociodemographic profile of the 294 students who comprised the final sample for the study. The relatively low proportion of Hispanic respondents reflects the decision to exclude English as a second language students from the study population. All Hispanic respondents were enrolled in regular, English-language basic skills classes.

Table 5-1

Description of Respondents, in Percentage *

(N=294)

Characteristic	Percent
Sex	
Female	69.7
Male	30.3
Race/Ethnicity	
Black	50.0
White	31.3
Hispanic	13.2
Other	5.6
Reading Level	
1 (0-3)	7.9
2 (4-6)	36.3
3 (7-8)	34.6
4 (9-12)	21.2
Employment Status	
Employed	37.5
Not Employed	62.5
Age**	
16-20	29.6
21-29	31.2
30+	39.1

*Percentages may not add to 100 due to rounding

**Mean age = 30.

Table 5-1 reveals that the majority of sample were women, minority group members, relatively young, unemployed, and reasonably proficient readers. Although data on family income were not obtained, it appears likely that most of the respondents were economically disadvantaged. This conclusion is buttressed by the fact that 26.6% reported receiving some form of public assistance.

Reasons for Participation

Respondents were asked to "think back to when you first enrolled in the program. What were your reasons or goals for enrolling?"

As expected, the majority gave more than one reason. Their answers were inductively coded into six categories: to get a diploma/finish schooling; to prepare for further education or training; to get a job or better job; to improve basic skills; to enhance personal development/esteem/confidence; and a catch-all "other" category. Because of the large number of multiple responses, the data generated by this question were judged to be of little utility and are not reported here. What is reported in Table 5-2 are the frequency distributions based on the follow-up question, "Which one of these reasons was the most important to you?"

Table 5-2

Most Important Reason for Enrollment, in Percentage

(N=291)*

Reason	%
1. Obtain Diploma/Finish School	43.6
2. Prepare for Further Education or Training	8.9
3. Obtain a Job or Better Job	18.9
4. Improve Basic Academic Skills	18.9
5. Personal Development/Esteem/Confidence	7.6
6. Other	2.1

*In this and subsequent tables, cases with missing values are deleted from the base N of 294.

Although Table 5-2 may contain few surprises, it is noteworthy that the majority of respondents did not identify obtaining a diploma or finishing school as their primary reason for enrollment. Moreover, in the researchers' opinion, an extremely important feature of this and most of the tables that follow is the meaningfulness or validity of the response categories. As discussed in the methodology chapter, predetermined, fixed responses were not employed in seeking answers to complex questions. Instead, the respondents were allowed to answer in their own words, which

were then inductively coded to generate the response alternatives. The reasons for enrollment listed in Table 5-2 are grounded in the respondents' own experience, not in the researchers' "expert opinion."

Impact of Change Events

Previous research (Aslanian and Brikell, 1980; Knox, 1977) suggests that the decision to enroll in adult education is often influenced or "triggered" by life change events that heighten need or motivation to learn. This proposition was tested by asking respondents "Why did you enroll at that particular time? Was there something happening in your life that made you decide to enroll?" Nearly two-fifths of the respondents (39.1%) identified specific changes in their lives that influenced their decision to enroll in ABE. Of these two-fifths, 41% identified the need for a job or a better job as the precipitating factor, 33% mentioned family changes (e.g., divorce, new baby, marriage, death, empty nest), and 26% said that job changes, both actual and anticipated, prompted their enrollment. Examples of such changes included loss of job, job insecurity, injury, and age-related decrements in physical stamina or strength.

Expectations of ABE Program

Respondents were asked, "once you enrolled, was the adult education course what you expected it to be like or was it different?" The main reason for asking about expectations was to examine the responses of those who found the course to be "different." Was it different in a positive way or in some negative sense? It was anticipated that those who perceived the course as negatively different would be more likely to drop out and less likely to realize beneficial outcomes than other respondents.

Nearly half the students (48.6%) stated the course was what they had expected; 6% indicated uncertainty, and 45.2% responded that it differed from their expectations. Table 5-3 summarizes the inductively coded responses of the 133 respondents who perceived the course as different from what they had expected.

The most striking figure in Table 5-3 is the large proportion of students who perceived the course as characterized by more self-pacing and individualized instruction than had been expected. Clearly, the majority saw ABE as different in positive or "neutral" (e.g. degree of difficulty) ways from what they had anticipated. Not enough attention, not enough structure, and too much structure might be considered "negative differences." However, the "negatives" totalled only 23 respondents, too few to use "negative differences in expectations" as a variable for subsequent statistical analyses.

Table 5-3

Ways In Which Course Differed From Expectations in Percentage*

(N=133)

Ways Course Differed	Percent
More Personal Attention	12.9
Self-Pacing/Individualized Instruction	30.3
Easier Than Expected	6.8
Harder Than Expected	6.1
Not Enough Personal Attention	9.1
Not Enough Structure	9.1
Too Much Structure	2.3
Other Answer	23.5

*Percentages do not add to 100 due to rounding

Problems Related to Success in Class

For purposes similar to inquiring about the nature of differences in expectations, respondents were questioned about the extent to which certain factors impeded their success in class. A scale (called PROBDEX) was constructed in anticipation that students who experienced difficulties in the classroom (i.e., scored high on the scale) would also experience negative outcomes related, for example, to dropout and goal achievement. As reported subsequently, to some extent this hypothesis proved to be correct. Table 5-4 is based on responses to the following question: "Now I'd like to ask you about some problems adults often experience in going to classes. After I read each statement, please tell me if it is very true, somewhat true, or not true."

Table 5-4

Extent To Which Respondents Experienced Class-Related Problems, in Percentage*

(N=294)

Problem	Extent True: Not True	Somewhat True	Very True
a. You didn't feel you were making enough progress toward your goals	47.3	39.1	13.6
b. You didn't receive enough help or attention in class	67.3	20.7	12.0
c. The classwork was harder than you expected	62.2	28.6	9.2
d. You didn't get support or encouragement from family or friends	71.4	17.7	11.0
e. You had trouble attending class due to job or family responsibilities	48.0	26.9	25.2

*Percentages across rows may not add to 100 due to rounding

Although, in general, few respondents agreed that the problems listed were "very true" for them, a substantial number indicated difficulties related to making progress toward their goals and attending class regularly because of job or family responsibilities. Other research (e.g. Mezirow, Darkenwald, and Knox, 1975) has identified these problems as particularly prevalent in ABE programs.

Two open-ended follow-up questions asked respondents to identify any other important problems they had and to indicate which single problem they considered most serious. The responses to the "most serious problem" question are shown in Table 5-5 below.

It is noteworthy that the majority of problems identified as most serious were external to the program, that is, life-situational. However, perhaps most significant is the relatively large number who stated that their own shortcomings as learners constituted their most serious problems. Undoubtedly, much of the self-blame is justified, but "difficulties in learning" to some degree reflect deficiencies in teaching.

Previous research (Mezirow, Darkenwald, and Knox, 1975) suggests that ABE students are extremely uncritical of their teachers and almost invariably blame themselves for their academic shortcomings and failures. In any event, when a third of the students express outright dissatisfaction with the program or indicate that they have difficulties with learning, program personnel should be concerned.

Table 5-5

Problems Identified As Most Serious Or Difficult, In Percentage*

(N=223)

Problem	Percent
Work-Related Scheduling Problems	18.0
Childcare Responsibilities/Problems	9.9
Family Problems (e.g., marital, illness, lack of support/encouragement)	16.1
Transportation	7.2
Health (e.g., drugs, drinking, physical and mental illness)	5.8
Dissatisfaction with Program (e.g. teachers, methods, curriculum)	15.2
Difficulties with Learning (e.g., poor progress, poor study skills, lack of self-discipline)	17.5
Other	10.2

*Percentages do not add to 100 due to rounding

Attendance and Attrition

Attendance rates and attrition (dropout) can be considered outcomes of participation in ABE, as well as mediating factors that influence other outcomes, especially "benefits" such as extent of learning and personal goal attainment. This section focuses on rates of attendance and dropout, and reasons for dropout or "discontinuance."

Emphasis is given to the distinction seldom made in dropout research between "positive" and "negative" discontinuers. The former group comprises persons who drop out because they achieve their objectives for enrolling.

In contrast, the latter group consists of indiviuduals who drop out for reasons such as personal problems, lack of motivation, or dissatisfaction with the educational program. Unless this distinction is made, it is impossible to compute the negative or true dropout rate, which is of special significance because of its widespread use as an indicator of program effectiveness and efficiency.

Attendance Statistics

Before discussing discontinuance, it might be noted that class attendance dropped sharply from October to March (the months for which data were obtained). Average hourly class attendance by month was 32.2 in October, 25.8 in November, 13.0 in December (when most programs curtailed classes), 13.7 in January, 12.5 in February, and 15.2 in March. Of course, monthly attendance figures, as time passes, tend to be depressed by the usual practice of including everyone officially enrolled, even discontinuers, in the calculations.

In April, respondents were asked, "Are you still attending the adult education class or have you stopped attending?" One hundred fifteen, or 39.1%, indicated they were still attending, compared with 179 or 60.1% who said they had stopped attending. Of those who has ceased attendance, 45.2% said "yes" and 41.6% "no" when asked "Do you plan to start class again later this spring or next fall?" The remaining 13.3% stated they were "uncertain."

It is highly probable that the figure for those who planned to return to class is inflated, especially when one considers that only 17.8% of the sample were "carryovers" from previous years.

Reasons for Discontinuance

A gross annual dropout rate of 60% may seem incredibly high, but it is quite consistent with evidence from numerous other sources, including nationwide surveys (Development Associates, 1980; Kent, 1973). As noted above, however, gross dropout statistics can be extremely misleading, for they fail to distinguish "positive" from "negative" discontinuers. In the present study, this distinction was accomplished by asking all respondents who had stopped attending why they did so. Their answers were then inductively coded and interpreted as indicative of either positive or negative discontinuance. Table 5-6 reports the results.

Inspection of Table 5-6 reveals that nearly half of the discontinuers were not dropouts in the conventional, negative sense of the term. In fact, nearly one-fourth earned their high school diplomas.

Table 5-6

Reasons Given for Discontinuing Attendance, in Percentage

(N=176)

Reason	Percent
Work Schedule Conflicts	11.9
Child Care Problems	6.3
Family Difficulties	8.5
Health Problems	5.1
Dissatisfaction with Program	8.0
Earned Diploma	24.4
Entered Job Training Program	11.9
Program Ended or Course Completed	10.8
Other	13.1

One would think that official records would reflect such facts and that all positive terminations would be so identified. In practice, however, there is no systematic way of identifying all or perhaps even most positive terminations. To illustrate, fewer than 20% of students who take the GED examination provide the GED testing centers with the necessary information so that exam performance can be reported to the instructional program. Even when such information is communicated, it may be received after instruction has terminated. Likewise, students who have entered a training program may simply stop attending class without informing their teachers or counselors of the reason why. In short, few programs have developed a cost-effective student follow-up system that would resolve these kinds of problems.

Supplementary Findings

A question of obvious interest is what factors account for or predict the phenomenon of negative dropout? Using exploratory correlational procedures and multiple regression analysis, two statistically significant predictors were identified. One, not surprisingly, was total hours of class attendance ($B = -.29$, $P = .0007$). As the negative standardized partial correlation coefficient indicates, negative dropouts (scored 0) were characterized by lower class attendance than were positive dropouts (scored 1). The second (Beta)

predictor, again not surprisingly, was the PROBDEX scale described in Chapter 3 (B = .36, P = .0001). Those participants who experienced more problems (e.g., lack of progress, not enough help in class, lack of support from family or friends) were more likely than others to be negative dropouts. Taken together, these variables accounted for 25% of the variance associated with dropout.

Employment-Related Outcomes

As can be seen by inspection of items 10 through 13 of the "Adult Education Follow-Up Survey" (Appendix A), the questions dealing with employment-related outcomes were both numerous and complex. Rather than present the data in a series of discrete tables, it was decided to summarize the principal findings in outline form in the section below.

Summary of Principal Findings Relating to Employment

1. At the time they enrolled in an adult education program, 37.5% of respondents were employed. At the time the survey was administered, 50.0% of respondents were employed. Thus, there was a net gain in employment of 12.5%

2. Twenty-three percent of the respondents were unemployed and not seeking employment, and thus were not in the labor force. For those who were in the labor force, the net gain in employment was 16.4%.

3. Of respondents employed at the time they entered the adult education program, 18.2% changed jobs by the time the survey was administered. Of these, 61.1% reported that they had found a better job, 38.9% a job that was "about the same," and 0% a worse job.

4. Of respondents employed at the time of the survey, 64.8% felt that their job performance had improved during the previous six months.

5. Of respondents employed at the time of the survey, 41.8% had obtained a raise during the previous six months.

6. Of respondents employed at the time of the survey, 14.2% had been promoted during the previous six months.

7. Of respondents employed at the time of the survey, 56.7% felt that their job security had improved during the previous six months.

8. Of respondents unemployed and seeking employment at the time of the survey, 78.8% believed that their participation in adult education would help them find a job.

In general, employment-related gains or benefits appear to have been modest, but by no means insignificant. The extent to which they can be attributed to participation in adult education, however, is problematical. It was discovered early in the interview process that nearly all the

respondents interpreted the "attribution" question ("Did the adult education program help...?") extremely literally. "Help" was interpreted to mean direct assistance in obtaining a job or better job. Indirect forms of help such as enhanced skills, qualifications, motivation or self-confidence simply did not come to mind when this question was asked. Consequently, the responses to these items were discarded as invalid.

On logical grounds, however, it would seem that certain positive outcomes could not be expected in the absence of some form of relevant intervention. This would seem particuarly true of the findings that nearly two-thirds of those employed at the time of follow-up felt their job performance had improved and more than half believed they were more secure in their jobs.

Acquisition and Application of Basic Skills

For the majority of participants, the outcomes reported in this section constitute the "bottom line." The reason, of course, is that adult basic education's principal purpose is to upgrade the basic skills of functionally illiterate adults. Enhancement of basic skills is not, however, an end in itself. Rather, the three R's are intended to be applied to meeting the literacy-related demands of everyday life. They also enhance access to educational and economic opportunity - particularly in the form of eligibility for job training programs and other forms of further education.

It is important to note regarding outcomes that a substantial minority of basic skills students cannot be considered severely educationally handicapped. These are the "level fours," (21.2% of the sample) whose reading ability ranges from grade 9 to grade 12. Presumably, most "level fours" are preparing to take the GED test and require relatively little basic skills remediation. For them, the "bottom line" is passing the test, not acquiring and applying literacy skills. Their responses to the acquisition and application questions, consequently, might be expected to depress the proportion reporting positive outcomes. Statistical analyses revealed that such was the case -- to a modest extent -- for the application questions, but not for the questions on acquisition of knowledge and skills.

Respondents were asked a series of four parallel questions regarding acquisition and application of knowledge and skills related to (1) reading, (2) writing, (3) math, and (4) "other things" learned. The results are reported separately below for each of these four categories.

Reading

In response to the question, "Has the adult education class helped you become a better reader?", 82.8% answered "yes" and 17.2% "no." Respondents were then asked, "Since enrolling in the class, have you used your reading skills outside of the classroom to do something you couldn't do before, or to do it better?" Nearly two-thirds (66.1%) responded affirmatively. They were then asked, "What are some of things you have done or can now do with your reading skills?", followed immediately by a standard "probe": "read recipes, want ads, the mail, magazines, things like that?" One hundred fifty-eight respondents reported a total of 345 ways in which they applied their improved

reading skills. Their answers were inductively coded into the seven catergories shown in Table 5-7. The percentages represent the frequencies in each category divided by the total for all categories, that is, 345.

Table 5-7

Application of Reading Skills Outside the Classroom

Application	Frequency	Percent*
Read Newspapers	77	22
Read Magazines	70	20
Read Books	74	21
Advertisements (employment and consumer)	39	11
Job Reading	22	6
Recipes	19	6
Mail	15	4
Other	29	8
Totals	345	98

*percentages do not add to 100 due to rounding

It is clear from Table 5-7 that a majority of respondents applied their improved reading skills to the traditional print media -- sources of both information as well as entertainment. The number applying their enhanced skills to job-related reading tasks is more substantial than the table suggests when one considers that more than half the sample were unemployed. The figures for advertisements, mail, and recipes are especially indicative of application of skills to rudimentary tasks of a "functional," everyday nature.

Writing

Because writing is given less emphasis than reading or math in most basic skills programs, it is not surprising that only 62.6% of the respondents indicated that the class helped them to write better. Similarly, use of writing skills outside the classroom was reported by a relatively modest 49.4%

of those interviewed. This group was then asked, "What are some things you have done or can do now with your improved writing skills?", followed immediately with the probe: "fill out forms, write letters or notes, things like that." One hundred twenty-four respondents reported a total of 186 ways in which they had applied their improved writing skills. Their inductively, coded responses, with frequency and percentage distributions, are reported in Table 5-8.

Table 5-8

Application of Writing Skills Outside the Classroom

Application	Frequency	Percent*
Letters and Notes	88	47
Forms (e.g., applications, checks, bank forms)	54	29
Job Writing (e.g., notes, memos, resumes)	24	13
Creative Writing (e.g., poems, stories)	8	4
Other	12	6
Totals	186	99

*percentages do not add to 100 due to rounding

Not surprising, writing letters and notes were the most frequently mentioned ways in which respondents applied their improved writing skills. Job writing, like job reading, again emerged as a significant category, especially in view of the fact that roughly half the study sample was unemployed. Completing forms of various kinds was mentioned by a substantial number of those interviewed. Finally, a few blithe spirits reported that they had begun writing poems and stories.

Mathematics

Eighty-five percent of the respondents indicated that participation in adult education had helped them to improve their math skills. In regard to the application of skills outside the classroom question, 58.3% responded in the affirmative. This group was then asked to describe some of the things they had done with their improved math skills. One hundred forty respondents reported a total of 229 ways in which they had applied these skills. Their responses are shown in Table 5-9.

Table 5-9

Application of Math Skills Outside the Classroom

Application	Frequency	Percent
Consumer Math (e.g., price comparisons, discounts, sales tax)	74	32
Job Math (e.g., measurements, cashiering, inventory)	45	20
Checkbook and Bank Transactions	43	19
Personal Money Management (e.g., budgets, tax forms, records)	37	16
Help Children with Schoolwork	16	7
Other	14	6
Totals	229	100

The findings in Table 5-9 reveal a variety of applications of math skills to the demands of everyday life. Again, it should be noted that the frequencies in the job-related category are less than they would be if the majority of the sample were employed. The category "help children with schoolwork" is similarly affected by the fact that more than half of the respondents had no children living at home.

Other Learning

The last question posed in this section inquired about other learning: "Aside from reading, writing, and math, were there any other things you learned in the adult education class?" The 51.9% who responded affirmatively were then asked "What other things?" Their responses are shown in Table 5-10.

Table 5-10

Other Learning Acquired in Addition to 3R's

Other Learning	Frequency	Percent
Social Studies	47	26
Interpersonal Skills (e.g., relating to others, communicating better)	36	20
Science	18	10
Learning to Learn (e.g., self-directedness, study skills, self-discipline)	13	7
Self-Development (e.g., confidence, esteem, self-discovery)	12	7
Home Economics (e.g., nutrition, childcare)	10	5
Job-Seeking Skills	8	4
Other	38	21
Totals	182	100

Some of the findings in Table 5-10 are predictable and easy to explain. Social studies and science, for example, are routinely included in the curriculum for "upper level" students preparing for the GED test. In addition, social studies (specifically American history) is required by state law to earn an adult high school diploma. Similarly, home economics and job-seeking skills are frequently included in "life-skills" components of the standard curriculum. In contrast, self-development, interpersonal skills, and learning how to learn are seldom part of the formal curriculum. Instead, they are indirect outcomes of the learning process — outcomes which for some participants may be equally or more important than those explicitly included in the curriculum.

Supplementary Findings

Exploratory correlational and multiple regression analyses were employed to identify predictors of both the acquisition and application of basic skills. As expected, acquisition and application (as measured by summing the "yes" answers for the relevant questions) were themselves substantially correlated ($r = .64$, $p = .0001$). Thus, it was not surprising that both of these measures were associated to a modest, but statistically significant extent, with the same predictor variables.

These included total instructional hours, perception of the class as differing from expectations in a positive way, and extent to which the class facilitated attainment of individual goals for enrolling. However, when these variables were controlled in multiple regression equations, only hours of instruction emerged as a statistically significant predictor (B = .25, P = .0001 for acquisition; B = .22, P = .03 for application).

Attainment of Personal Goals

As can be seen from Table 5-2, basic skills students enroll for a variety of reasons, not all of which directly correspond to the goals of the instructional program. Those that do not can be viewed as ultimate or terminal reasons for participation that are facilitated by the acquisition of reading, writing, and computation skills.

Whether directly or indirectly related to the instructional program, individual goals are obviously of the utmost importance. In order to ascertain the extent of individual goal attainment, two questions, one "subjective" and the other "objective," were posed to all respondents.

The subjective question was put as follows: "Thinking back to your reasons or goals for enrolling in the adult education class, has the class helped you to reach them totally, a lot, some, a little, (or) not at all?" Of the 294 respondents, 13.4% answered "totally," 48.6% "a lot," 25.7% "some," 9.6% "a little," and 2.7% "not at all." Clearly, a substantial majority felt that their learning experiences contributed significantly to helping them attain their goal(s).

Because obtaining a GED or adult high school diploma was by far the most frequently stated goal for enrolling in adult education (stated as most important goal by 43.6% of the sample), the "objective" question asked, "Did the class help you pass the GED exam or earn an adult high school diploma?" Twenty-one percent responded affirmatively, 67% negatively, and 12% said they already had a high school diploma. Excluding the latter 12% on the grounds that prior possession of a diploma is irrelevant to the issue of program outcomes, the adjusted figures indicate that 23.8% obtained a diploma and 76.2% did not. Thus, over a period of approximately seven months, nearly a fourth of the sample succeeded in obtaining a high school credential. It should be noted, moreover, that this figure underestimates the annual proportion of basic skills students who earn a secondary level credential. The interviews were conducted in April, and thus the data do not include those students who passed the GED test later in the spring or who passed, but had not yet received confirmation from the testing service. In addition, not all adult high school students knew in April if they had successfully completed all requirements for a June diploma.

Further Education and Training

A major function of adult basic skills programs is to prepare participants for further education or training. Respondents were asked, "Do you plan to enroll in any kind of training or education program in the near future -- say within 6 months or a year?" More than three-fifths (62.9%) responded

affirmatively; 18.1% said "no," and the remaining 19% stated they were "uncertain." Those who answered affirmatively were asked "What do you plan to study?" Their responses are given in Table 5-11.

Table 5-11

Further Education: Subjects Respondents Plan to Study

(N = 151)

Subject	Percent
Computing (e.g., key punching, data entry, programming)	19.9
Secretarial Studies (e.g., clerk typist, medical or legal secretary)	17.9
Allied Health (e.g., LPN, RN, dental assistant, lab technician)	17.2
Business (e.g., bookkeeping, accounting)	7.3
Other	23.8
Uncertain	13.9

Table 5-11 indicates that the great majority plan to study sub-professional, vocational subjects. Only a handfull of those interviewed planned to pursue an arts or science discipline, or to prepare for a career in law, teaching, social work, or any other field requiring a bachelor's or postgraduate degree. Those whose answers fell in the "other" category almost invariably mentioned a vocational or technical subject, for example, electronics, auto mechanics, hairdressing, carpentry, plumbing, and the like. For most, these modest but worthy career aspirations reflect a healthy realism. However, as previous researchers have suggested (Mezirow, Darkenwald, and Knox, 1975), some, if only a small minority, are probably selling themselves short.

Respondents planning to continue their education were asked not only what they planned to study, but where. Not surprisingly, nearly a third (28.7%) were uncertain, often mentioning two or three possibilities. Of those who had firmer plans, as Table 5-12 shows, most mentioned a local community college or public vocational-technical school.

Table 5-12

Further Education: Where Respondents Plan to Study

(N = 151)

Type of Institution	Percent
Two-year Community College	22.7
Public Vocational-Technical School	18.7
Four year College	11.3
Proprietary Trade or Vocational School	6.7
Other	12.0
Uncertain	28.7

Dependence on Public Assistance

If adult basic skills programs help people to get jobs, better jobs, or promotions, then it follows that participants, over time, should become less dependent on public assistance. To test this proposition, respondents were asked the following question, which was consciously phrased to "de-stigmatize" receipt of public support: "Many people these days are receiving public assistance, such as ADC or food stamps. Have you received such assistance at any time during the past year?" More than one-fourth (26.6%) replied that they had received some form of public assistance. They were then asked, "Since October, has the amount of assistance decreased, remained about the same, or been totally eliminated?" Roughly two-thirds (67.1%) reported that the amount had remained about the same, 18.4% that it had decreased, and 14.5% that assistance had been eliminated. Finally, respondents who indicated a decrease or elimination of public support were asked why: "Was the reduction... due to your getting a job, your making more money, or to something else?" Close to half (43.5%) stated that the reason was getting a job, 8.7% making more money, and 47.8% "something else." It seems probable that the "something else" answer, in large part, reflected cut-backs in benefits and a tightening of eligibility requirements at the time the research was conducted. In any event, it is significant that more than half of the reduction in public assistance can be attributed to respondents' gaining employment or increasing their income.

Personal and Family Effects

This section focuses on indirect outcomes of participation in adult education related to changes in feelings about oneself and effects on parent-child interaction and child adjustment in the domain of childrens' schooling.

Affective Outcomes

Respondents were asked, "In general, do you feel better about yourself, the same, or worse as a result of attending the adult education program"? A strikingly high 92.1% replied "better"; 7.2% said "the same." Virtually no one (0.7%) indicated feeling worse. The 92.1% who responded that they felt better were asked to specify "Why or in what way do you feel better about yourself?" Their inductively coded responses are shown in Table 5-13.

Table 5-13

Reasons Given for Feeling Better About Self as a Result of Attending Program, in Percentage

(N=266)

Reason	Percent
Personal Accomplishment (e.g., met challenge, made progress, achieved personal goal)	38.3
Academic Achievement (improved reading, math, writing skills)	24.4
Enhanced Self-confidence/Esteem	24.1
Greater Economic Opportunity	8.3
Greater Educational Opportunity	2.6
Other	2.3

It is perhaps surprising, and certainly noteworthy, that academic achievement, the outcome most directly related to the instructional program, was cited by only a fourth of the students as the reason why they felt better about themselves. In contrast, more than two-fifths cited indirect, affective reasons -- namely, enhanced self-confidence or self-esteem and the psychic rewards of personal accomplishment. In view of the generally lower levels of self-esteem, self-confidence, and tangible accomplishments among this population, these affective outcomes take on special significance. Moreover, they are not only valuable as ends in themselves, but as means or necessary conditions for continuing personal growth and accomplishment, both academically and in the world outside the classroom. Finally, the responses

to this question can be viewed as expressions of underlying psychological and educational needs seldom overtly articulaterd by undereducated adults.

Effects Related to Children in School

Respondents were asked if they had school-aged children or teenagers living with them at home. Those who did (45.4%) were then asked, "Has your participation in the adult education class resulted in any of the following changes?" A series of questions were then posed in a yes/no format. The results are depicted in Table 5-14.

Table 5-14

Responses to Questions about Children and School, in Percentage

(N = 129)

Question	Response Yes	No
Do you help the children with their schoolwork more than you used to?	75.4	24.6
Do you talk to them more than you used to about school?	81.4	18.6
Have they developed a better attitude toward school?	72.7	27.3
Are they now getting better grades?	74.8	25.2
Have you become more involved with the school, for example by attending meetings or other activities, or talking with teachers?	49.6	50.4

The potentially enormous import of the findings reported in Table 5-14 is self-evident. In fact, they are so striking that one's immediate reaction may well be to doubt their credibility. Certainly the questions posed, especially the first two and the last, are of the type likely to elicit social response bias. On the other hand, a high proportion of "yes" answers might be expected from a sample of parents who not only chose to return to "school" themselves but who are actively involved in learning. Virtually all parents voice support for pious sentiments regarding the importance of education; however, acting on the basis of such sentiments is demonstrable evidence of true conviction. Finally, the pattern of "yes" responses seems to support the credibility of the data in Table 5-14. Of note here is that the largest proportion of "yes" responses were elicted by the question having to do with talking more to one's children about school. Not only does this behavior require little effort on the part of the parent, but it is difficult to see how it could be avoided if only because children, seeing their parents "going to school," would be likely to initiate such discussion. In contrast, the

question on becoming more involved with the school, attending meetings and so on, elicited by far the smallest proportion of "yes" answers. Obviously, the behavior in question not only requires parental initiative and effort, but in many cases would evoke psychological resistance or even fear due to negative past school experience and lack of self-confidence in dealing with "experts" or authority figures. Finally, in regard to the first question, a significant number of parents told the interviewers that they and their children helped each other with their school work.

Single Most Important Benefit of Participation

The final question posed to respondents was worded as follows: "Taking everything into account, what is the one most important benefit you gained from participating in the adult education class?" Their inductively coded responses are shown in Table-15.

Table 5-15

Single Most Important Benefit Gained from Participation in Adult Education, in Percentage

(N = 279)

Benefit	Percent
Academic Improved (e.g., reading, writing, math, grammar, study skills)	39.4
Enhanced Self-confidence/Esteem	32.3
GED or Adult High School Diploma	10.0
Job-related Benefits (e.g., qualified for training, obtained better job, improved job skills	9.0
Enhanced Interpersonal Skills	5.0
Other	4.3

Perhaps the most striking finding in response to the "one most important benefit" question is the large proportion of respondents who reported indirect, affective outcomes related to enhanced self-confidence or self-esteem. The significance and validity of these affective outcomes are bolstered by the large proportion of respondents who gave similar answers to the question concerning reasons for feeling better about oneself as a result of participating in the program (see Table 5-13). In fact, although by no means identical, there is a considerable degree of parallelism in the answers to these two questions.

Direct outcomes of instruction, including improved academic skills and earning a high school credential, constituted the most important benefits

of participation for approximately half of the sample. However, while nearly a quarter of the respondents reported earning a GED or adult high school diploma, only 10% stated that earning a diploma was the single most important benefit of participation. On the face of it, this discrepancy appears puzzling in the extreme. But is it really a puzzle? Would middle-class educators or researchers be surprised if a survey revealed that earning a degree was not mentioned by the majority as the single most important benefit of attending college? If there is a puzzle, it lies in our perceptions, or misperceptions, of the motives and needs of undereducated adult learners.

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CHAPTER VI

OUTCOMES AND IMPACT FINDINGS: CONCLUSIONS AND IMPLICATIONS

Introduction

The focus of this chapter is on the meaning and import of the findings from the two follow-up surveys. What are participants and graduates telling us about the nature and value of their experiences in adult education programs? How do the findings of this study compare with those of other large-scale follow-up surveys? Are the participant perspectives and outcomes congruent with the stated purposes of the Adult Education Act and state-level program priorities? What can we conclude about program "impact" on individuals and society? These are the principal questions addressed in the present chapter.

What Are Participants Telling Us?

As noted in previous chapters, a distinctive feature of the telephone survey was its extensive use of open-ended questions in order to give respondents full opportunity to "have their own say." They told us a great deal, including many things that surprised us. This section emphasizes the important general messages, not the statistical specifics.

Reasons for Participation

Very few participants volunteered only one reason for participating in ABE. Most mentioned several goals or possible benefits, which indicates that they perceived the program as educational in the general sense of the word, not simply as a means to some pragmatic end such as a better job or GED diploma. To illustrate, when forced to give their single "most important reason" for enrolling, participants' responses split evenly between obtaining a job or better job and improving their academic skills. For many, of course, obtaining a diploma or "finishing school" was a paramount objective. The general message seems to be that individuals enroll in ABE for a variety of reasons, some narrowly utilitarian and some not. It is hard to see any fundamental differences between the motivations of this population and those of more advantaged adults who return to college.

Employment-Related Outcomes

Those respondents who were unemployed and seeking employment appeared to have benefitted from their participation in ABE. The data need to be interpreted cautiously, however, since gains in this area cannot be confidently attributed solely to the program. The net gain in employment for the telephone survey sample, three-fourths of whom had not earned a diploma in the seven-month interval between enrollment and follow-up, was 16%. In contrast, the net gain for GED and adult high school graduates 12 to 18 months after earning their diplomas was 44%. Although the time differential and the persistence/ability factor almost certainly contributed to the graduates' greater gains, the difference is so large that we are led to conclude that the "credential effect" is a real one. The magnitude of the effect, however, cannot be determined from the available data.

Other work-related outcomes, such as promotions, improved earnings, and enhanced job performance exhibited similar gains, with graduates generally benefiting more than non-graduates. Perhaps the most convincing evidence of

program impact is the fact that roughly two-thirds of the telephone sample and three-fourths of the graduates reported improvement in their job performance. For the former group especially, it is difficult to see how this effect could be due to factors other than program participation.

Overall, then, the message seems to be that participation in ABE pays off, albeit sometimes modestly, in the domain of employment and work. In addition, a closely related positive effect was a substantial decline in dependence on public assistance. Finally, it seems reasonable to infer that work-related gains and emancipation from public assistance are likely to affect (and be affected by) positive indirect effects, such as enhanced self-confidence and self-esteem.

Academic Outcomes

Not surprisingly, the great majority of participants reported that ABE helped them to improve their reading, writing, and math skills. Perhaps more important for many was the fact that they applied their newly gained skills to the demands and tasks of everyday life. This was particularly true for reading, which probably reflects both the emphasis on reading in the curriculum and the ubiquity of reading tasks and opportunities in the world outside the classroom. Particularly significant, in our view, is the nature of "other things learned" volunteered by half of the sample. In addition to the expected (science, social studies), more than a third indicated they had learned to communicate with or relate better to others, that they had learned how to learn (enhanced their study skills, self-discipline, self-directedness), or they had grown as persons through self-discovery or gaining confidence or self-esteem. It is particularly noteworthy that these "other learnings" were volunteered by the respondents, not checked off in response to predetermined categories. In conclusion, the respondents told us that they were acquiring and applying the three R's and that many of them were developing in other important ways not directly related to the formal curriculum.

Affective Outcomes

As noted above, learning in ABE is not confined to the core academic subjects in the formal curriculum. Although titled "affective outcomes," this section also deals with learning. Broadly defined, learning means change in behavior, including not only observable skills and knowledge acquisition but change in attitudes, values, and self-concept. Learning in this broader sense was truly impressive among ABE participants, both in its scope and significance. More than nine out of ten respondents reported that they felt better about themselves as a direct result of participating in ABE. When asked why, about two-fifths cited a sense of personal accomplishment and a fourth said they had gained greater self-confidence or self-esteem. Another fourth said that improvement in their academic skills was the principal factor in their feeling better about themselves. As noted in Chapter 5, in view of the generally low levels of self-esteem and self-confidence among this population, these affective outcomes are of major significance. Not only are they important as ends in themselves, but they are requisites for continuing personal growth and accomplishment both in the classroom and the world outside.

Principal Benefit Gained from Participation

The validity and significance of the findings on affective outcomes are strongly supported by participants' perceptions of the "one most important benefit" they gained from participation. As noted in Chapter 5, the most striking finding was the large number who reported indirect, affective outcomes related to self-confidence or self-esteem. Almost as many students (roughly a third) specified enhanced self-confidence or self-esteem as the major benefit of participation as specified improvement in academic skills. Moreover, despite the fact that approximately a fourth of the respondents had earned a high school diploma, only 10 percent mentioned the diploma as the most important benefit of participation.

What are the respondents telling us? Basically, it seems, two things. First that a great many lack self-confidence and/or self-esteem and, that for varying reasons, participation in ABE has helped enhance their self-confidence and self-esteem. Second, they are voicing their belief in the importance to them of improving their basic academic skills and affirming that indeed they have improved their basic skills proficiencies.

Other Outcomes

As previously stated, basic skills students enroll for a variety of reasons, not all of which directly correspond to the official goals of the instructional program. Those reasons that do not can be considered ultimate ends for participation that are facilitated by the acquisition of reading, writing, and computation skills.

Personal Goal Attainment. Whether directly or indirectly related to instructional objectives, individual goals for participation are clearly of paramount importance. In this regard, the message from participants is resoundingly positive. Roughly one in seven reported that their goal(s) for enrolling had been "totally" reached, with another half responding that ABE had helped "a lot." Only about one in eight indicated minimal progress toward their goal(s).

The most frequently stated personal goal was to obtain a GED or adult high school diploma. After only seven months in the program, nearly a fourth of the participants had obtained this objective. Thus the "hard evidence" lends support to the credibility of the highly encouraging self-report data on personal goal attainment.

Further Education and Training. An important official goal of ABE is to prepare participants for further education and training, particularly training for specific jobs. Interestingly, only about a fourth of the telephone survey respondents said that further education or training, or getting a job or better job, was their principal reason for enrolling. However, more than three-fifths indicated, in response to a subsequent question, that they planned to enroll in postsecondary education or training programs within a year. Most, as expected, planned to study sub-professional vocational subjects at community colleges or publicly supported vocational-technical schools. The follow-up survey of GED and adult high school graduates found that three-fifths of the sample actually did continue their education, thus lending credibility to the "plan to" data, at least for those who earn a diploma.

Children in School. There is little doubt that participation by parents in ABE has significant indirect effects on (1) their interactions with their children regarding school and (2) their children's attitudes and performance in school. These findings were discussed and interpreted in some detail in Chapter 5. Consequently, all that will be said here is that they underscore the general pattern of significant outcomes that are in no way directly related either to stated curriculum objectives or to the officially articulated purposes and priorities of the Adult Education Act. Put simply, many of the most important positive outcomes of ABE are indirect effects of participation rather than direct effects of formal instruction.

Comparisons with other Follow-Up Studies

Only rough comparisons can be made with the findings of other large-scale impact studies because of differences in sample characteristics, time frames, response rates, and a number of other such factors. In addition, previous studies asked relatively few comparable questions, as well as fewer questions generally, and utilized fixed-answer rather than open-ended formats. Despite these caveats, some useful comparisons are possible. Significantly, the relevant findings of past research tend to be roughly in accord with our own. For comparison purposes, differences between our findings and those of past studies of plus or minus 10 percent or less can be considered inconsequential.

Outcomes for GED Graduates

The only comparable follow-up study of adults who earned a high school credential was that recently conducted by Cervero (1983). A national sample of GED graduates was surveyed 18 months after earning their diplomas (our time frame was 12 to 18 months). Cervero focused on job-related outcomes and participation in further education and training. Table 6-1 contrasts Cervero's findings with our own.

Table 6-1

Comparison of Present Study's Findings with Cervero's Follow-Up of GED Graduates, in Percentage

Outcome	Present Study	Cervero
Obtained Job	45	52
Job Promotion	29	20
*Enrolled in Job Training Program or Technical School	31	24
**Enrolled in College	29	51

*Cervero item: "admitted to job training program"
**Cervero item: "admitted to educational institution"

As Table 6-1 shows, Cervero's outcome findings were quite similar to our own. Two of his original items, "keep jobs" and "salary increase," were omitted from the table because of significant differences between his wording of the items and ours.

Employment and Further Education Findings

Two major studies that were not GED follow-ups, but more comparable to our telephone survey of enrolled students, reported figures on employment gains and further education and training (Boggs, 1979; Kent, 1973). A third study also addressed the latter outcome (Development Associates, 1980). Regarding net employment gains, Kent reported a 12% increase and Boggs a 50% increase (including "got a better job"). We found a net job gain of 16%. In addition, 61% of those who changed jobs reported obtaining a "better job." On the whole, the findings from the three studies seem to be fairly consistent. Concerning plans for further education and training, Kent reported a figure roughly comparable to our own (about two-thirds) and Development Associates reported a figure of 58%. For all practical purposes, these findings are identical.

Acquisition of Basic Skills Findings

The findings on self-reported improvement in basic skills proficiencies are only crudely comparable because of differences in question wording. Kent's figures are probably depressed because he used a rating scale with a positive anchor of "very much" improved. In contrast, our study and Development Associates' asked simply if ABE had helped the respondent improve his or her skills. Keeping in mind that Kent reported percentages based on "very much" improvement, it seems reasonable to conclude that the following findings are pretty much comparable:

(1) Improved Reading Skills. Kent, 50%; Development Associates, 75%; Present study, 83%.
(2) Improved Writing Skills. Kent, 33%; Development Associates, 66%; Present study, 63%.
(3) Improved Math Skills. Kent, 46%; Development Associates, 69%; Present study, 58%.

Only one of the major prior outcome studies inquired about application of basic skills proficiencies. Boggs (1979) reported that 57% of his respondents said that they "read more" and 29% "wrote letters more often." The corresponding figures for the present study were 66% and 49% respectively. The 20% differential in application of writing skills might be attributed to Boggs specifying "letters," whereas our respondents were not constrained by the wording of the question. The nine percent differential for application of reading skills is inconsequential.

Other Findings

Public Assistance

In addition to the present study, only one investigator examined this outcome. Kent reported that 26% of his sample were initially receiving welfare benefits. At the time of follow-up a year later the figure was 22%, an insignificant decrease. The proportion of our sample initially receiving public assistance was nearly identitical to Kent's (27%). After seven months, 18% reported a decrease in public assistance and 15% said they were

receiving no assistance at all. The discrepancy between our findings and Kent's appears to be significant. However, possible differences in labor market conditions and eligibility requirements could account for some or most of the difference.

Goal Attainment

Development Associates reported that 47% of their respondents had "successfully reached" their goals, with 32% "partially reaching" them. Our findings, on the surface at least, seem less encouraging. In response to the question, "thinking back to your reasons or goals for enrolling in the adult education class, has the class helped you reach them totally, a lot, some, a little, or not at all?" Thirteen percent said "totally," 49% "a lot," 26% "some," and the remainder "little" or "not at all." There is reason to believe, aside from differences in the wording of the question, that the apparent discrepancy in goal attainment is questionable. One factor is the low response rate of the earlier study, which probably introduced a selective, positive base. The other is the large differential in the follow-up time parameters. It is hardly reasonable to expect total or successful goal attainment for large numbers of participants when the average elapsed time from enrollment to follow-up is only seven months.

Children and School

Both Boggs and Kent asked parents if they helped their children with schoolwork as a result of participating in ABE. Of Kent's respondents, 55% replied affirmatively. The corresponding figure for the Boggs study was 79%, and for the present study 75%. Boggs also asked his parent respondents if they "attended meetings at school more often." A considerably lower 38% responded affirmatively, as was the case with a comparable question included in our own survey (50%). Clearly, Boggs' findings are consistent with our own. Kent's finding regarding help with school work is inconsistent, although not grossly so, with ours and Boggs'. Why this is so is not clear.

Affective Outcomes

Of the three principal prior studies, only that conducted by Development Associates probed affective outcomes and reported them in percentage distributions. In response to an open-ended question, 84% of the respondents said that they thought better of themselves as a result of participation in ABE. In the present study, in response to a similar question, 92% reported "feeling better" about themselves. The credibility of these findings is supported by another study of program impact in Maryland (Walker, Ewert, and Whaples, 1981). The research focused on changes in people's lives that could be attributed to participation in ABE. The results indicated that the major change was in self-concept: 89% of respondents reported "feeling different about themselves" as a result of participation. In sum, our finding that the overwhelming majority of participants gained self-confidence or self-esteem is consistent with the data reported in prior studies.

Conclusion

Comparisons of outcome findings of the present research with those of past studies reveal a surprisingly high degree of consistency. This consistency not only supports the validity of the findings of the present study, but suggests

that at least certain outcomes of participation in ABE may not be much different for New Jersey than for Ohio or Maryland or, indeed, for the entire nation. It is important, of course, to underscore the words "certain outcomes." Owing to differences among studies in outcome measures, comparisons were limited to a handful of somewhat general findings.

Policy Implications

The findings of this study have implications for federal and state policies and program priorities. In New Jersey, and most other states, the major sources of funding for adult basic skills education are appropriations authorized by the Adult Education Act of 1966. As Mezirow, Darkenwald and Knox (1975) note:

> The focus of the Act is 'education for adults whose inability to speak, read or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability.' By legal definition, ABE means education designed to: (1) 'help eliminate such inability ...'; (2) 'raise the level of education of such individuals ...'; (3) 'improve their ability to benefit from occupational training and otherwise increase their opportunities for more productive and profitable employment'; and (4) 'make them better able to meet their adult responsibilities.' (pp. 2 - 4)

As the above summary of the Adult Education Act makes clear, its official goals are narrowly utilitarian. The bottom line is employment and adult education is seen not as a right or end in itself, but as a means for training adults to get and keep jobs. Despite the Act's vocational training emphasis, most states, as well as the U.S. Department of Education, have construed its mandate very broadly, emphasizing the "raise the level of education" clause. Nevertheless, particularly in recent years, the political climate has been such as to encourage more emphasis on vocationalism. This emphasis is most clearly evident in federal and state policies calling for closer linkages between ABE and federally-funded job training programs.

A potential counterweight to the stress on vocationalism is President Reagan's new "national literacy initiative." But the emphasis of the initiative seems to be on private sector voluntary action in the form of one-on-one tutoring for total or near-total illiterates. It is likely that programs funded under the Adult Education Act will play a marginal role in whatever comes of the "initiative." In any event, to date the President has failed to match his rhetorical commitment with additional funding for adult basic education.

The findings of this study, and of similar studies, reveal a certain degree of incongruence between the stated goals of the Adult Education Act and the goals articulated by program participants. Naturally, any lack of congruence in goals will result in a corresponding lack of congruence between intended and actual program outcomes.

The present study found that fewer than 20% of ABE participants enrolled primarily to get a job or better job. Approximately 26% did get a job or better job, but this outcome cannot be attributed solely to program effects. To prepare for further education or training was mentioned by 9% of participants as their primary reason for enrolling. However, despite the secondary status of preparation for further education as an initial goal, nearly two-thirds of the telephone survey sample stated that they planned to enroll in some kind of postsecondary education or training program, and indeed a roughly equal proportion of GED and adult high school graduates actually did so. Presumably, a majority of those who enter training or educational programs eventually obtain a job or better job. Consequently, in respect to employment, the indirect, ultimate outcomes of participation seem to partially fulfill the intent of the Adult Education Act -- at least for those participants who have any need or interest with respect to obtaining a job or better job.

Where, then, lies the lack of congruence between policy and program reality? First, and most obvious, is the fact that getting a job or better job is not a relevant goal for a large proportion of program participants, particularly mature adults as opposed to recent school dropouts. Second, most of the important outcomes or benefits of participation in ABE have little or nothing to do with employment. Finally, the accelerating trend toward linking ABE directly with job training programs poses a threat to the fundamentally educational nature of most programs as they are presently constituted in New Jersey and the majority of other states. To the extent that ABE becomes the handmaiden of vocational training, it will (1) no longer meet the needs of large numbers of undereducated adults; (2) its impact on the general quality of people's lives will be limited; and (3), as Smith (1984) suggests, it will increasingly become an alternative to completing secondary school, thereby attracting large numbers of alienated adolescent dropouts. These observations should in no way be construed as denigrating the importance of closer links between ABE and vocational training. The need is obvious, indeed urgent. The point is that policymakers should be alert to the potentially dysfunctional consequences of placing excessive emphasis on coupling ABE with job training.

Impact of Adult Basic Education

Our findings suggest that the impact of adult basic education in New Jersey is substantial, both for individual participants and for the larger society. For the majority of individuals, the direct and indirect outcomes of participation are numerous and significant. The direct effects, that is, those linked closely to general curriculum objectives, include not only enhanced proficiency in the basic academic skills, but the application of these newly acquired abilities to the functional demands of everyday life. Also of importance are the "other learnings" that in general are less closely tied to formal curriculum priorities. These include enhanced interpersonal skills, "learning to learn" (manifest in greater self-directedness, improved study skills, and enhanced self-discipline or planfulness), and personal development in the form of self-discovery, greater self-confidence, and enhanced self-esteem.

Indirect effects are much more varied and equally if not more consequential. They include gains in employment, earnings, and job performance, reduced dependence on public assistance, and participation in further education and and training. Just as significant, in our view, are the less pragmatic indirect

outcomes: marked gains in self-confidence and self-esteem for virtually all participants and, in the case of parents, increased concern for their children's school success, accompanied by actual improvement in their children's attitudes toward school and school performance.

The impact on the larger society of the beneficial outcomes described above is not hard to discern. Immediate gains in employment and reductions in public assistance obviously contribute directly to the economic well-being of the state. Probably more important in the long run is the economic impact of the thousands of undereducated adults who each year continue to develop their "human capital" by enrolling in postsecondary education and training programs. The great majority prepare for service or technical occupations where the demand for skilled labor is high and likely to remain so. It might also be noted that the continuing influx of former ABE participants contributes in no small way to maintaining a cost-effective, publicly supported system of community colleges and postsecondary vocational-technical schools. Finally, the larger society is bound to benefit from the indirect effects of parent participation in ABE on their children's school adjustment and performance. In short, the stakes are indeed high in this "last gamble on education," but for most of the players the payoff is substantial.

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CHAPTER VII

A MODEL FOR STATEWIDE STUDENT FOLLOW-UP

Need

Statewide planning and long-term program improvement have been handicapped by insufficient information on the outcomes of adult basic skills education in New Jersey. At present, local programs lack the resources (including validated data collection instruments and procedures) for "tracking" their basic skills students to determine program impact. As a result, program improvement efforts have been hampered by inadequate outcome data; so, too, has local level accountability for state and federal funds. At the state level, the situation is similar. Particularly distressing, according to Division of Adult Education staff, is that incomplete outcome data lead to state accountability reports that severely understate the impact of adult basic skills education. Furthermore, sketchy data on the economic benefits gained by GED and adult high school graduates makes it difficult to conduct cost/benefit analyses that accurately reflect the ratio of benefits to costs. Inadequate student outcome data also creates a problem for state-level decision makers who need to determine how programmatic characteristics affect student achievement and cost effectiveness. Finally, there is the need to develop feasible and uniform statewide criteria and procedures for collecting student outcome data on an ongoing basis.

Alternative Approaches

Three approaches for developing an ongoing statewide system for student follow-up were identified and their feasibility assessed. These approaches were labelled the "Decentralized Model," the "Contract for Services Model," and the "Centralized Model." This section briefly describes the advantages and disadvantages of each, emphasizing the criteria of feasiblity and cost.

The Decentralized Model

In brief, the decentralized model assigns responsibility for the collection, analysis, and reporting of follow-up data to local adult basic skills programs. Although, in principle, it can be argued that local programs should assume these responsibilities, in actuality we have found that the great majority cannot and will not. The root problem is that they lack the personnel and fiscal resources (e.g., for postage) to bear the burden of data collection and reporting. Not only did our advisory board of local practitioners strongly concur with this conclusion, but so too did a small sample of local directors interviewed by phone. In fact, the directors indicated that they were already overwhelmed with "paperwork" requirements. Several stated they would discontinue their basic skills programs rather than accept the added burden of collecting student follow-up data. Consequently, in our judgment, the Decentralized Model is simply not feasible.

The Contract for Services Model

The State Education Department could utilize an outside contractor, such as a university or survey research organization, to collect, analyze,

and report student follow-up data. The advantages to such an arrangement include acquisition of high-level technical expertise in sampling design and data analysis and the freeing of local program and State Education Department personnel from the time and human-resource consuming costs of conducting student follow-up.

The principal disadvantages relate to total cost and cost in relation to benefits. A major factor contributing to relatively high total costs is the need for the contractor to utilize field personnel to work with local programs in order to secure lists of eligible students for sampling purposes. Our estimate of total costs to the state range from $25,000 for a contract with Rutgers to $40,000 if a survey research firm is engaged.

In regard to cost-benefit considerations, technical expertise may be desirable but it is not necessary given the routine nature of the task now that the follow-up instrument has been developed and validated. A further consideration that militates against the Contract for Services Model is the lack of assurance that the state will have the necessary financial resources to engage the services of an outside contractor on a continuing basis. Finally, and perhaps most important, this model is predicated on the assumption that a relatively small number of programs would be sampled. Consequently, it would preclude feedback on local outcomes for the great majority of programs. The above considerations lead us to conclude that the Contract for Services Model is probably not feasible or cost-effective.

The Centralized Model

The basic feature of the Centralized Model is that it is designed to integrate student follow-up with the Division of Adult Education's existing data collection and analysis system. Its implementation would require very little additional staff time or cost at the local program level. At the state level, implementation would involve some additional staff time and cost. However, both staff and fiscal costs would be minimal because student follow-up would "piggy-back" on the computerized data collection and analysis procedures already in place. We believe this alternative to be both feasible and cost-effective. Its principal features are outlined in more detail below.

Basic Features of Centralized Follow-Up Model

Basically, the Centralized Model would involve utilizing the existing Student Record Form in conjunction with an additional form and a mailer to be processed routinely at intake by the local program. The second form would be a brief, self-administered follow-up questionnaire which would not identify the student, but only the "case" by code number as is now done with the Record Form. Of course, the questionnaire would not be filled-out at time of enrollment. Instead, it would be inserted into the mailer which would come with an address label on which the student's name and address would be entered. Finally, a business reply envelope addressed to the Division of Adult Education would be inserted into the mailer along with the questionnaire. The mailer would be set aside for local mail-out

on a predetermined statewide "Follow-Up Day" approximately seven months after the fall registration period. The follow-up questionnaires would be keypunched at the Division's processing facility along with the Student Record Form data and the results tabulated statewide and for each local program, which would receive a confidential student follow-up report.

Such a system would place minimal demands on the local program. For the Division, any additional work would be largely clerical and would not place an undue burden on the professional staff. Furthermore, the system would allow for the use of existing computer capabilities and involve little in the way of added processing costs.

Operational Alternatives

To implement the proposed follow-up model requires that decisions be made regarding (1) frequency of follow-up activities (annually, biannually, etc.); (2) sampling design and procedures; and (3) reporting policies and procedures.

Frequency

Ideally, statewide student follow-up should be conducted on a continuing annual basis. Timely feedback is important for program improvement and accountability purposes, both at the state and local levels. However, the advantages of timeliness must be weighed in relation to other important factors, principally cost and effort. Obviously, an annual student follow-up would be twice as costly as a biannual follow-up and three times as costly as a triannual follow-up. Although we would exclude the triannual option on the grounds that the data would be unacceptably untimely, we believe that a biannual schedule is the preferred alternative because the cost of an annual follow-up may not justify its benefits.

In reaching this conclusion, a major consideration in addition to cost and effort was purpose and utility. The primary reason for conducting a student follow-up on an ongoing basis is to provide feedback for program improvement efforts. If programs X, Y and Z are identified in the initial follow-up as less successsful than comparable programs in facilitating, for example, application of basic skills, then X, Y and Z must diagnose and remediate their deficiencies. In all probability, however, the results of such program improvement efforts are not likely to be observable over a one-year or less time frame. But they should be observable, and therefore useful, within two years' time. All things considered, then, we recommend that statewide follow-up be conducted on a biannual schedule.

Sampling Design and Procedures

The most fundamental issue, technically speaking, is not "sampling design" but whether the total population of programs or a sample should be utilized in implementing the proposed follow-up model.

The advantages and disadvantages of utilizing the total population of programs (and thus students) are fairly obvious. The advantages include: (1) simplicity; (2) reduction of sampling error or bias; (3) biannual feedback that can be provided to every program in the state. Among the

disadvantages are: (1) significantly greater cost; (2) the need for all local programs to expend some effort in the biannual follow-up process; and (3) redundancy: there is no need to survey the entire population of roughly 30,000 students when satisfactory estimates of statewide outcomes can be secured with a smaller random sample.

The crux of the decision lies in the trade-off between vastly reduced costs on the one hand and lack of timely feedback to all local programs on the other. Should the entire population be surveyed, the cost of postage alone would be approximately $12,000 (assuming a return rate of 50% based on our experience with the GED/AHS follow-up survey). Additional costs (envelopes, reproduction of forms, keypunching and computer time) are estimated at $6,000 to $8,000 roughly. Whether or not to spend about $20,000 biannualy to survey the entire population is a decision that can only be made by the Division of Adult Education.

In order to examine another option, let us assume that the cost of surveying the entire population is deemed unacceptable. Let us also assume that it is considered essential that every program in the state receive follow-up feedback once every two years. The following sampling procedures would then obtain:

(1) The entire population of adult basic skills programs would be listed (N = approximately 130). A 50% sample would be randomly selected using a table of random numbers. This sample would be designated "Sample A." The remaining 50% of the programs would be designated "Sample B."

(2) Programs established after the selection of the initial samples would be randomly assigned to "A" or "B" (a coin toss would suffice).

(3) The follow-up sample for year one would be "A." In year two the follow-up sample would be "B." In year three "A" would again constitute the follow-up sample, with this sequence repeated indefinitely.

Reporting

It is recommended that aggregate statewide findings, beginning with the year one "benchmark" follow-up, be reported to all programs in the state. In addition, those programs constituting the sample should receive a breakdown of findings for their own students so that they can compare their outcomes with statewide norms. However, to avoid invidious and perhaps misleading comparisons and to mitigate the general level of threat, individual programs should be guaranteed that their outcome data will be held in strict confidence. In other words, they should be assured that only authorized officials of the State Education Department will have access to individual program data.

Instrumentation

A student follow-up questionnaire was designed in accordance with the following criteria. First, to ensure a maximum return rate, it had to be short -- one sheet printed on both sides. Second, items had to be clearly worded in simple language; complex "skip to" questions could not be included. Third, the majority of items should address tangible outcomes rather than attitudes and opinions. Fourth, the items should be of utility both for program improvement and accountability purposes. Fifth, the questionnaire should be as comprehensive as possible, including items addressed to human capital investment, personal development, and economic outcomes and both the direct and indirect effects of participation. Finally, the questionnaire should consist of the most "workable" and significant measures of program outcomes as determined by the results of the present research.

In constructing the questionnaire, the only criterion listed above that presented difficulties was the second. Although it was deemed desirable to utilize all items in their original form, some appeared not to be worded or formatted as simply as possible. It should be recalled that the original data were obtained by telephone. The questions were read to the respondents and repeated or clarified as the need arose. A self-administered questionnaire, however, requires that respondents be able to read and complete all items without assistance.

To address this latter issue, two forms of a prototype instrument were developed and field-tested with 24 adult basic skills students. One form consisted of items "lifted" from the telephone survey instrument. The second comprised "simple language" items designed to elicit comparable data. The second form was found to be markedly superior: only a few low-level readers had any difficulty reading and completing it. These persons were subsequently interviewed to pinpoint the sources of difficulty, which were mostly unfamiliar words or terms, such as "employment status." These and other minor problems were easily rectified. The final version of the Statewide Student Follow-Up Questionnaire is reproduced in Appendix D.

Data Processing Procedures

It is essential that the same five-digit student or "case" number currently imprinted on the Student Record form also be imprinted or written-in on the Student Follow-Up Questionnaire. This also applies to the six-digit county and district (program) code. Unless this is done, it will not be possible to match-up the student data from the two forms to permit comprehensive analyses relating student and program characteristics to student outcome findings.

The Student Follow-Up Questionnaire was designed to be "self-contained." That is, it contains all the information needed to generate comprehensive outcome data without recourse to additional data from the Student Record Form. However, because of space limitations, the Follow-Up Questionnaire does not provide the following information which is provided on the Student Record Form: (1) age, (2) sex, (3) presence of a handicap, (4) citizenship, (5) race or ethnic group, (6) reading level, (7) instructional program (ESL, bilingual basic skills, etc.), (8) hourly attendance by month, and (9) reasons for discontinuing participation.

For certain purposes, the Division of Adult Education may wish to crosstabulate background data from the Record Form with outcome data from the Follow-Up Questionnaire. For example, it may be useful to determine if outcomes differ by geographical region or by program characteristics, such as size, student composition, average hours of attendance, etc. Hence the importance of matching student and program (district) codes for the two instruments. To reiterate, unless this is done it will not be possible to examine outcomes in relation to student background and program characteristics.

Concluding Note

If the necessary human and fiscal resources are available, local adult basic skills programs can utilize the appended Student Follow-Up Questionnaire whether or not a statewide follow-up system is implemented. We believe, too, that the Follow-Up Questionnaire items are sufficiently generic to warrant the use of the instrument by local programs in states other than New Jersey. Benchmark data for judging and interpreting local outcomes can be obtained from the statewide norms reported for the relevant items in Chapter 5 of this monograph Of course, since the norms were established for programs in New Jersey, they should be viewed as only rough benchmarks for interpreting outcomes in other states.

APPENDIX A

ADULT EDUCATION FOLLOW-UP SURVEY

Rutgers University
Center for Adult Development

ADULT EDUCATION FOLLOW-UP SURVEY

Card 1

1
(1)

Interviewer _____ Respondent's Name _____ ID# _____ 2-4 ( )

Date Completed _____ ( ) _____ - _____ Telephone Number 5 ( )

Start Time _____ Program Name _____ ID# _____

Finish Time _____ Program Address _____

R's Age _____ 6-7 ( )

R's Sex _____ 8 ( )

A. Hello, may I speak to _____?

(If CONNECTION IS MADE), Go to B below.
(IF NOT HOME), Ask when to call again or how else to reach respondent.
Enter Response Below.
(NOTE, If asked to identify yourself, give your name and say: "I'm from Rutgers University and I wanted to ask him/her some questions about education."

B. This is _____ from Rutgers Univesity. We are conducting a study to help schools improve their adult education classes. _____ is one of the programs we're working with. I'm calling to ask if you would help by answering a few questions. We're asking the same questions of other students from _____. Your answers are very important and completely confidential. All answers will be used without names.

Section I

1. First, we are interested in knowing the reasons people enroll in adult education classes for reading and math skills. Think back to when you first enrolled in the program (PAUSE). What were your reasons or goals for enrolling? (PROBE: Were there others?)

2. Which one of these reasons was the most important to you?

3. Why did you enroll at that particular time? Was there something happening in your life that made you decide to enroll?

4. Once you enrolled, was the adult education course what you had expected it to be like or was it different?

   (IF DIFFERENT), How was it different? [PROBE: Were there things you didn't like?]

   1 EXPECTED
   2 DIFFERENT
   3 UNCERTAIN

   9 ( )

5. Thinking back to your reasons or goals for enrolling in the adult education class, has the class helped you to reach them:

   (IF NOT AT ALL), Why do you think the class hasn't helped you?

   1 TOTALLY
   2 A LOT
   3 SOME
   4 A LITTLE
   5 NOT AT ALL

   10 ( )

6. Now I'd like to ask you about some problems adults often experience in going to classes. After I read each statement, please tell me if it is very true, somewhat true, or not true.

	Very	Some	Not	
a. You didn't feel you were making enough progress toward your goals	3	2	1	11 ( )
b. You didn't receive enough help or attention in class	3	2	1	12 ( )
c. The classwork was harder than you expected	3	2	1	13 ( )
d. You didn't get support or encouragement from family or friends	3	2	1	14 ( )
e. You had trouble attending class due to job or family responsibilities	3	2	1	15 ( )

7. Can you think of any other important problems you had, things you didn't like or that made it hard to attend class?

8. Of all the problems mentioned, which was the most serious or difficult for you?

9. Are you still attending the adult education class or have you stopped attending?

(IF STOPPED), Why did you stop attending?

1 STILL
2 STOPPED

16 ( )

(IF STOPPED), Do you plan to start class again later this spring or next fall?

1 YES
2 NO
3 UNCERTAIN

17 ( )

Section 2

Now I would like to ask you about some of the benefits you might have gained from going to the adult education class.

10. Were you employed at the time you first entered the adult education program?

1 YES
2 NO

18 ( )

IF NO, GO TO QUESTION 11

(IF YES), Do you have the same job now, did you change jobs, or did you recently become unemployed?

1 SAME
2 CHANGE
3 UNEMPLOYED

19 ( )

(IF SAME), GO TO QUESTION 12

(IF UNEMPLOYED), GO TO QUESTION 13

(IF CHANGE), Compared with your last job, is the job you now have

1 A BETTER JOB
2 ABOUT THE SAME
3 A WORSE JOB

20 ( )

(IF BETTER JOB), Did the adult education program help you in any way to get the job you now have?

1 YES
2 NO
3 UNCERTAIN

21 ( )

(IF NO OR UNCERTAIN), GO TO QUESTION 12

(IF YES), How did it help?

GO TO QUESTION 12

11. Are you employed now?
1 YES
2 NO
22 ( )

IF NO, GO TO QUESTION 13

(IF YES), Before you got your job, had you been receiving unemployment benefits?
1 YES
2 NO
23 ( )

(IF YES), Did the adult education program help you in any way to get the job you now have?
1 YES
2 NO
3 UNCERTAIN
24 ( )

(IF YES), How did it help?

12. Regarding your present job, in the last six months

a. Do you feel you are doing your job better?
1 YES
2 NO
3 UNCERTAIN
25 ( )

(IF YES), Has the adult education class helped? How?

b. Did you get a raise?
1 YES
2 NO
26 ( )

(IF YES), Did the adult education class help? How?

c. Did you get a promotion?
1 YES
2 NO
27 ( )

(IF YES), Did the adult education class help? How?

d. Do you think you're more likely to keep your job?
1 YES
2 NO
3 UNCERTAIN
28 ( )

(IF YES), Did the adult education class help? How?

GO TO QUESTION 14

13. Are you currently looking for employment?
1 YES
2 NO
29 ( )

(IF YES), Do you think the adult education class might help you get a job?
1 YES
2 NO
3 UNCERTAIN
30 ( )

(IF YES), How do you think it might help?

14. Has the adult education class helped you become a better reader?
    1 YES
    2 NO
    31 ( )

15. Since enrolling in the class have you used your reading skills outside of the classroom to do something you couldn't do before or to do it better?
    1 YES
    2 NO
    32 ( )

    (IF YES), What are some things you have done or can now do with your improved reading skills? [PROBE: read recipes, want ads, the mail, magazines, things like that]

16. Has the adult education class helped you to write better?
    1 YES
    2 NO
    33 ( )

17. Since enrolling in the class have you used your writing skills outside of the classroom to do something you couldn't do before or to do it better?
    1 YES
    2 NO
    34 ( )

    (IF YES), What are some things you have done or can do now with your improved writing skills? [PROBE: fill out forms, write letters or notes, things like that]

18. Has the adult education class helped you improve your math skills?
    1 YES
    2 NO
    35 ( )

19. Since enrolling in the class have you used your math skills outside the classroom to do something you couldn't do before or to do it better?
    1 YES
    2 NO
    36 ( )

    (IF YES), What are some things you have done or can do now with your improved math skills? [PROBE: balance a check book, prepare a tax return, compare prices, things like that]

20. Aside from reading, writing, and math, were there any other things you learned in the adult education class?
    1 YES
    2 NO
    37 ( )

    (IF YES), What other things?

21. Did the class help you pass the GED exam or earn an adult high school diploma?
1 YES
2 NO
38 ( )

(IF YES), Did completing high school enable you to get a license or certificate or in some other way help you to qualify for a specific job or trade?
1 YES
2 NO
39 ( )

(IF YES), What license did you obtain or what trade or job did you qualify for?

22. Do you have any school-aged children or teenagers living with you at home?
1 YES
2 NO
40 ( )

(IF YES), Has your participation in the adult education class resulted in any of the following changes?

a. Do you help the children with their schoolwork more than you used to?
1 YES
2 NO
41 ( )

b. Do you talk with them more than you used to about school?
1 YES
2 NO
42 ( )

c. Have they developed a better attitude toward school?
1 YES
2 NO
43 ( )

d. Are they now getting better grades?
1 YES
2 NO
44 ( )

e. Have you become more involved with the school, for example by attending meetings or other activities, or talking with teachers?
1 YES
2 NO
45 ( )

23. In general, do you feel <u>better</u> about yourself, the <u>same</u> or <u>worse</u> as a result of attending the adult education program?
1 BETTER
2 SAME
3 WORSE
46 ( )

(IF BETTER), Why or in what way do you feel better about yourself?

(IF WORSE), Why or in what way do you feel worse about yourself?

24. Aside from the class we've been talking about, are you currently enrolled in any kind of training or education program?
1 YES
2 NO
47 ( )

(IF NO), GO TO QUESTION 25

(IF YES), (a) What are you studying?

(b) Where are you studying it?
(name of school, college, agency)

(c) Did the adult education class help you get into, prepare for, or find out about this program?

1 YES
2 NO

48 ( )

GO TO QUESTION 26

25. Do you plan to enroll in any kind of training or education program in the near future--say within 6 months or a year?

1 YES
2 NO
3 UNCERTAIN

49 ( )

(IF YES), (a) What do you plan to study?

(b) Where do you plan to study it?
(PROBE: college, employer vocational-technical school, trade school)

26. Many people these days are receiving public assistance, such as ADC or food stamps. Have you received such assistance at any time during the past year?

1 YES
2 NO

50 ( )

(IF YES), Since October has the amount of assistance decreased, remained about the same, or been totally eliminated?

1 SAME
2 DECREASED
3 ELIMINATED

51 ( )

(IF DECREASED OR ELIMINATED), Was the reduction in public assistance due to <u>your</u> getting a job, <u>your</u> making more money, or to something else?

1 GETTING JOB
2 MORE MONEY
3 SOMETHING ELSE

52 ( )

27. One final question. Taking everything into account, what is the one most important benefit you gained from participating in the adult education class?

THANK YOU VERY MUCH FOR YOUR HELP.

APPENDIX B

ADULT EDUCATION STUDY

ADULT EDUCATION STUDY

THANK YOU FOR ANSWERING THESE QUESTIONS. YOUR ANSWERS ARE TOTALLY CONFIDENTIAL. NO ONE WILL KNOW YOUR NAME.

A. This section asks about changes that might have occurred in your life since earning your high school diploma. Please circle either Yes or No.

1. Since earning your high school diploma:

a. Have you enrolled in college? . . . . . Yes No

b. Have you participated in a job training program? . . . . . Yes No

c. Have you enrolled in a trade or technical school? . . . . . Yes No

d. Do you feel you set a better example for your children? . . . . . Yes No

e. Did you improve your reading or writing or math skills? . . . . . Yes No

f. Do you know more about how the government works?. . . . . Yes No

g. Do you feel better about yourself? . . . . . Yes No

h. Are you now able to do your job better? . . . . . Yes No

i. Are you now more likely to keep your job? . . . . . Yes No

j. Did you get a better job? . . . . . Yes No

k. Did you get a pay increase? . . . . . Yes No

l. Did you get a job promotion? . . . . . Yes No

B. This section asks questions concerning employment and your opinions about adult education.

1. At the time you officially received your diploma, were you employed (Check one):

/____/ Full-time? /____/ Part-time? /____/ Not at all?

2. Are you currently employed (Check one):

/____/ Full-time? /____/ Part-time? /____/ Not at all?

3. If you are unemployed, are you seeking employment now? Yes No

4. In the year (12 months) before you earned your diploma, how many months were you employed, if any?

_____ Number of Months

5. In the year (12 months) after you earned your diploma, how many months were you employed, if any?

_____ Number of Months

(OVER)

6. If currently employed, is your take-home pay higher now than when you officially received your diploma? Yes No

7. If your take-home pay is higher now, about how much more per week are you making? $_____

8. Many people these days are receiving unemployment benefits or some form of public assistance, such as Food Stamps or ADC.

a. Before you earned your high school diploma, were you receiving:

/___/ Unemployment benefits? /___/ Public assistance? /___/ Neither?

b. Are you currently receiving:

/___/ Unemployment benefits? /___/ Public assistance? /___/ Neither?

9. Please circle the response that best describes your opinion concerning the following statements:

a. The adult high school I attended was very helpful in preparing me to earn my diploma.

Strongly Agree | Agree | Disagree | Strongly Disagree

b. If the adult high school was not available to me, I would not have earned a diploma.

Strongly Agree | Agree | Disagree | Strongly Disagree

c. This section asks some questions about yourself. Please circle or enter the correct response.

1. What is your sex? Male Female

2. What is your age? _____ Age

3. Do you have any children 18 years old or younger? Yes No

If you would like to make any comments or suggestions, please do so in the space below.

THANK YOU!

APPENDIX C

STUDENT FOLLOW-UP FORM

STUDENT FOLLOW-UP FORM

We like to keep in touch with our students after they leave the program. Sometimes we call them up or write to them, just to ask questions about what they are doing. We also like to ask them how they liked our program. Sometimes they give us valuable suggestions about how we can make our program better.

Please take a few minutes to fill in this form, so that we will know where to reach you in the future.

YOUR NAME _____
first last

YOUR ADDRESS _____
street apartment number

_____
city state zip code

YOUR TELEPHONE NUMBER _____

Sometimes our students move. Then when we try to get in touch with them, we can't find them. Please give us the name and telephone number of two people who know you very well. These people will probably know how we can get in touch with you if you move.

PERSON #1 NAME _____

TELEPHONE NUMBER _____

How do you know this person? (circle one) friend
relative
other _____

PERSON #2 NAME _____

TELEPHONE NUMBER _____

How do you know this person? (circle one) friend
relative
other _____

APPENDIX D

STATEWIDE STUDENT FOLLOW-UP QUESTIONNAIRE

ADULT EDUCATION QUESTIONNAIRE

For Office Use Only

District 1-4 ( )

SRF# 5-9 ( )

DIRECTIONS: We want to improve New Jersey's adult education programs, and we need your help. Would you please take a few minutes to complete this questionnaire and return it in the enclosed envelope? Your opinions are very important and your answers are completely confidential -- nobody will know who filled out this questionnaire. Thank you for your help!

CIRCLE ONLY ONE NUMBER FOR EACH QUESTION.

1. Think about your reasons or goals for going to the adult education class. How much has the class helped you to reach your goals? (Circle one number.)
   1 A lot
   2 Some
   3 A little
   4 Not at all

   Q1 10 ( )

2. In general, has the adult education class made you feel better about yourself, the same, or worse?
   1 Better
   2 Same
   3 Worse

   Q2 11 ( )

3. Did you earn a GED or adult high school diploma?
   1 Yes
   2 No

   Q3 12 ( )

   If you answered YES to Question 3:
   a) What kind of diploma did you receive? 1 GED diploma 2 Adult high school diploma

   Q3A 13 ( )

4. Since enrolling in the class, have you used your reading skills outside the classroom to do something you couldn't do before or to do it better? . . . . . 1 Yes 2 No

   Q4 14 ( )

5. Have you used your math skills outside the classroom to do something you couldn't do before or to do it better? . . . 1 Yes 2 No

   Q5 15 ( )

6. Have you used your writing skills outside the classroom to do something you couldn't do before or to do it better? . . 1 Yes 2 No

   Q6 16 ( )

7. Do you have school-aged children living with you at home? . 1 Yes 2 No

   Q7 17 ( )

   If you answered YES to Question 7:
   a) Since enrolling in the class, do you help the children with their schoolwork more than you used to? . . . . 1 Yes 2 No

   Q7A 18 ( )

   b) Do you talk with them more than you used to about school? . . . . . 1 Yes 2 No

   Q7B 19 ( )

   c) Do they have a better attitude toward school? . . . 1 Yes 2 No

   Q7C 20 ( )

   d) Are they now getting better grades? . . . . . 1 Yes 2 No

   Q7D 21 ( )

PLEASE TURN OVER AND COMPLETE THE OTHER SIDE

8. When you first started the adult education class, were you receiving public assistance (for example, AFDC, Food Stamps)? 1 Yes 2 No — Q8 22 ( )

9. Are you now receiving public assistance? . . . . . 1 Yes 2 No — Q9 23 ( )

10. When you first started the adult education class were you:

1 Employed
2 Unemployed and looking for work
3 Unemployed and not looking for work

Q10 24 ( )

11. Are you now:

1 Employed
2 Unemployed and looking for work
3 Unemployed and not looking for work

Q11 25 ( )

Answer only if you are NOW EMPLOYED:

a) Since starting the adult education class, did you get a better job? . . . . . 1 Yes 2 No — Q11A 26 ( )

b) Did you get a raise or promotion? . . . . . 1 Yes 2 No — Q11B 27 ( )

c) Do you feel you are doing your job better? . . . . . 1 Yes 2 No — Q11C 28 ( )

12. Are you still attending the adult education class? . . . . . 1 Yes 2 No — Q12 29 ( )

If you answered NO to Question 12:

a) Are you now attending a college, a job training program, or some other educational program? . . . . . 1 Yes 2 No — Q12A 30 ( )

13. Sometimes adults have problems going to classes. Did you have these problems?

a) Trouble attending class because of job or family responsibilities . . . . . 1 Yes 2 No — Q13 31 ( )

b) Not enough help or attention from the teacher . . . . . 1 Yes 2 No — Q13B 32 ( )

c) Trouble learning things even though the teacher tried to help . . . . . 1 Yes 2 No — Q13C 33 ( )

14. Taking everything into account, what was the one most important benefit you gained from attending the adult education class? (circle one) — Q14 34 ( )

1 Greater self-confidence or feeling better about yourself
2 Improved basic skills (reading, math, writing, etc.)
3 A high school diploma or certificate
4 A job or better job
5 Preparation for college, a job training program, or some other educational program
6 Other benefit (please describe) _____

_____

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE. HAVE YOU ANSWERED EVERY QUESTION? YOUR OPINIONS ARE VERY IMPORTANT!